ZAMBIA INTEGRATED SYSTEMS STRENGTHENING PROGRAM

END OF PROJECT REPORT



December 2014

This publication was produced for review by the United States Agency for International Development. It was prepared by the Zambia Integrated Systems Strengthening Program (ZISSP).

About ZISSP:

The Zambia Integrated Systems Strengthening Program (ZISSP) is a technical assistance program to support the Government of Zambia. ZISSP is managed by Abt Associates, Inc. in collaboration with Akros Inc., the American College of Nurse-Midwives, BroadReach Institute for Training and Education, Johns Hopkins Bloomberg School of Public Health−Center for Communication Programs, Liverpool School of Tropical Medicine, and Planned Parenthood Association of Zambia. The project is funded by the United States Agency for International Development, under contract GHH-I-00-07-00003. Order No.GHS-I-11-07-00003-00.

Recommended Citation: Zambia Integrated Systems Strengthening Program. December 2014. *Zambia Integrated Systems Strengthening Program End of Project Report*. Bethesda, MD: Zambia Integrated Systems Strengthening Program, Abt Associates, Inc.

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Cover photos: (from left) A clinical mentorship visit; community Infant and Young Child Feeding volunteers: an Indoor Residual Spraying spray operator.

Photo credit: Photos on pages 14 (top) and 35 were taken by Jessica Scranton. All other photos throughout this document were taken by ZISSP staff during project implementation.

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ZAMBIA INTEGRATED SYSTEMS STRENGTHENING PROGRAM

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ACRONYMS

ACNM	American College of Nurse-Midwives
ACS	Active Case Surveillance
ADH	Adolescent Health
AID	Active Infection Detection
AIDS	Acquired Immune Deficiency Syndrome
AIRS	Africa Indoor Residual Spraying
APAS	Annual Performance Appraisal System
ART	Anti-Retroviral Therapy
BCC	Behavior Change Communication
BFHFI	Baby Friendly Health Facility Initiative
BRITE	BroadReach Institute for Training and Education
CBD	Community Based Distributor
CBMNLSS	Community Based Maternal and Neonatal Life Saving Skills
CBS	Capacity Building Specialist
CCO	Clinical Care Officers
CCT	Clinical Care Teams
CHC	Community Health Coordinators
CHIS	Community Health Information System
CHW	Community Health Worker
DCMO	District Community Medical Office
DDT	dichlorodiphenyltrichloroethane
DHIS2	District Health Information System 2
DHRA	Directorate of Human Resources Administration
EmONC	Emergency Obstetric and Neonatal Care
FANC	Focused Ante-Natal Care
FP	Family Planning
HCAC	Health Center Advisory Committee
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HR	Human Resource
HRH	Human Resource for Health
HRIS	Human Resource Information System
ICATT	IMCI Computerized Adaptation and Training Tool
iCCM	Integrated Community Case Management
IMCI	Integrated Management of Childhood Illness
IPTp	Intermittent Preventive Treatment of malaria in Pregnancy
IRM	Insecticide Resistance Management
IRS	Indoor Residual Spraying
ITN	Insecticide-Treated Mosquito Net
IYCF	Infant and Young Child Feeding
JHU−CCP	Johns Hopkins Bloomberg School of Public Health− Center for Communication Programs

LAFP	Long Acting Family Planning
LSTM	Liverpool School of Tropical Medicine
M&E	Monitoring and Evaluation
MACEPA	Malaria Control and Elimination Partnership in Africa
MAIYCN	Maternal, Adolescent, Infant and Young Child Nutrition
MBB	Marginal Budgeting for Bottlenecks
MCDMCH	Ministry of Community Development Mother and Child Health
MESA	Malaria Eradication Scientific Alliance
MNCH	Maternal, Newborn and Child Health
MOH	Ministry of Health
NHA	National Health Accounts
NHC	Neighborhood Health Committee
NIPA	National Institute for Public Administration
NMCC	National Malaria Control Center
NMCP	National Malaria Control Program
ORT	Oral Rehydration Therapy
PA	Performance Assessment
PMEC	Payroll Management and Establishment Control
PMI	President's Malaria Initiative
PMO	Provincial Medical Office
PMP	Performance Management Package
PMTCT	Prevention of Mother-to-Child Transmission of HIV
PPAZ	Planned Parenthood Association of Zambia
QI	Quality Improvement
RDT	Rapid Diagnostic Test
RED	Reaching Every Child in Every District
RHC	Rural Health Center
SBCC	Social Behavior Change Communication
SHA2	Systems for Health Accounting
SMAG	Safe Motherhood Action Groups
SMGL	Saving Mothers Giving Life Endeavor
TWG	Technical Working Group
USAID	United States Agency for International Development
WHO	World Health Organization
ZHWRS	Zambia Health Workers Retention Scheme
ZISSP	Zambia Integrated Systems Strengthening Program
ZMLA	Zambia Management and Leadership Training

ACKNOWLEDGMENTS

The Zambia Integrated Systems Strengthening Program (ZISSP) project conveys it is appreciation and thanks for four and a half years of collaborative achievements. ZISSP leaves behind an extensive body of shared work. This report attempts to highlight the key accomplishments over the life of the project. These accomplishments were possible only because of the collaboration with many leaders, partners, and participants at all levels. We recognize the contributions of:

- The United States Agency for International Development for the design, vision, and guidance to the program,
- The Ministry of Health and the Ministry of Community Development Mother and Child Health personnel at all levels from the central ministry to the health centers all across Zambia who were the primary implementers of the programs supported by ZISSP,
- Traditional leaders, members of civil society, and non-governmental organizations who are working to make their communities healthier and shared their commitment with us,
- Community members everywhere who participated as volunteers to promote, and in some cases provide health services, particularly in relation to maternal, newborn and child health (MNCH) and nutrition activities, family planning and malaria, for example, Safe Motherhood Action Group members, Neighborhood Health Committee members, peer educators, etc.
- Implementing partners who form a supportive community of practice in Zambia,
- The health cooperating partners who work to create alignment between the programs supported by all donors,
- And the personnel of the project at every level who worked collaboratively toward the achievements reported in this document.

EXECUTIVE SUMMARY

The United States Agency for International Development (USAID) funded the Zambia Integrated Systems Strengthening Program (ZISSP) between July 2010 and December 2014. ZISSP worked closely with the Ministry of Health (MOH) and the Ministry of Community Development Mother and Child Health (MCDMCH) to increase the use of quality, high-impact health services through a health systems strengthening approach. ZISSP's implementation strategies aligned with the National Health Strategic Plan (2011-2015) of the Zambian health sector.

This report presents ZISSP's performance throughout all years of implementation. Annex 1 highlights specific activities accomplished in 2014 in the absence of a separate annual report for the final year of implementation. ZISSP's achievements showcase the project's whole-system approach that enabled the MOH and MCDMCH to remove obstacles and strengthen the delivery and utilization of essential health services. ZISSP exceeded quantitative targets in the majority of implementation areas. (Life-of-project quantitative results are presented in Annex 2.) Highlights of achievements include the following:

- **Human Resources for Health (HRH):** Development of a customized Human Resource Information System (HRIS) for the MOH and MCDMCH, evaluation of the Zambia Health Workers Retention Scheme (ZHWRS) and development of the ZHWRS Sustainability Strategy.
- **Maternal, Newborn and Child Health (MNCH) and Nutrition:** Increased numbers of health workers trained in infant and young child feeding (IYCF), integrated management of childhood illness (IMCI), emergency obstetric and neonatal care (EmONC), long-acting family planning (LAFP), adolescent health services (ADH), and the Reaching Every Child in Every District (RED) strategy for immunization. Strengthened community capacity and linkages between community volunteers and health centers supported MNCH program implementation at community level. New teaching methods were introduced at nursing and midwifery schools.
- **Clinical care:** Harmonization of quality improvement (QI) and clinical care mentorship guidelines, and decentralization of QI and mentorship structures across all levels of the health system. QI Committees at health facility level implemented QI projects to improve health outcomes and 9,745 clinical mentoring sessions were conducted with health care workers.
- **Management:** Revision of the health sector's planning guidelines, development of *the Data Quality Audit Guidelines (first edition),* and creation of the Zambia Management and Leadership Academy (ZMLA).
- **Malaria:** Worked with the National Malaria Control Program (NMCP) to spray a total of 2,549,693 structures across four Indoor Residual Spray (IRS) seasons, enhance efforts to monitor both insecticide resistance and the resistance mechanisms present in the country, improve malaria case management practices, and create an active case surveillance system in two districts.
- **Community:** Scaled up Safe Motherhood Action Groups (SMAGs), built capacity of communities to participate in the annual health planning process, worked through 18 grantee organizations to increase community involvement in health, and conducted gender orientation for Community Health Assistants.

Across all areas, ZISSP support enabled production and/or revision of guidelines, training packages, job aids, evaluations, program assessments and other documents and tools for the MOH and MCDMCH, accomplished largely by working through the respective Ministries' Technical Working Groups (TWG). (Annex 3 lists these documents.)

ZISSP's experience generated lessons learned related to capacity-building strategies, secondment of project staff to national and provincial government offices, and approaches to integration of activities across the World Health Organization's (WHO) health systems strengthening "building blocks": Health service delivery, workforce, information, medical products, vaccines and technologies, financing, and leadership and governance.

The realignment of health responsibilities across the two government ministries (MOH and MCDMCH), which occurred mid-way through ZISSP implementation, injected uncertainty into planning activities at the national level and slowed progress in some systems strengthening activities. However, ZISSP was able to identify funds and shift some activities to support systems strengthening in the MCDMCH, while continuing support for the MOH. Additional challenges faced by ZISSP included stock outs of commodities at health facility level and delays in implementation and the transfer of human resources in the government health sector, both of which contributed to disruption of capacity-building plans.

ZISSP recommends that MOH and MCDMCH explore alternate approaches for capacity-building of health workers that are less expensive and require less time away from site for participants; continue to strengthen district-level planning and management systems building upon systems strengthened with ZISSP support; and strengthen their leadership role in TWGs.

1. CONTEXT: THE ZAMBIAN HEALTH SYSTEM

Zambia recognizes health care as one of the priority sectors that contribute to the well-being of the nation and therefore continues to partner with donors and other stakeholders to invest in the health sector. Although Zambia has recorded significant progress in most of the areas of health service delivery and health support systems, the nation has continued to experience a high burden of disease, which is mainly characterized by high prevalence of malaria, HIV, and MNCH health conditions. At the time ZISSP started implementing activities in Zambia, according to the Zambia Demographic and Health Survey 2007, maternal mortality stood at 591/100,000 live births, under-five mortality was 119/1000 live births and infant mortality stood at 70/1000 live births.[1]

Since 1992, Zambia has been implementing health sector reforms aimed at attaining equity of access to cost-effective quality health services as close to the family as possible. These reforms have been implemented through a system of health sector plans, which include successive five-year national health strategic plans and annual action plans. Further realignment of the MOH into two Ministries – MOH and MCDMCH – occurred in the middle of the implementation of the ZISSP project. The health sector in Zambia is coordinated as follows:

- **National Level:** The MOH headquarters is responsible for overall coordination and management of the health sector. According to the new structure, introduced in 2011, the MOH oversees the tertiary hospitals, general hospitals, statutory boards and Provincial Medical Offices (PMOs).
- **MCDMCH:** The MCDMCH is responsible for coordination and implementation of mother and child health services in Zambia. The MCDMCH oversees districts, health centers, health posts and community-level activities.
- **Provincial Level:** PMOs are responsible for coordination health service delivery in their respective provinces.
- **District Level:** District Community Medical Offices (DCMOs) are responsible for coordinating health service delivery at district level
- **Community Level:** At community level, Neighborhood Health Committees (NHCs) have been established to facilitate linkages between the communities and the health system.

In 2009, the health sector experienced a reduction in financial resources for government health programs due to issues with donor confidence in MOH management of funds. This exacerbated the need for added inputs and ultimately affected program implementation at all the levels of the health care system.

ZISSP was designed in 2010 to address multiple health challenges caused by weaknesses in health care system following the National Health Strategic Plan (2011-2015), which seeks to provide the strategic framework for ensuring the efficient and effective organization, coordination and management of the health sector in Zambia. These included gaps in implementation of high-impact health services that are accessible, affordable and of acceptable quality; challenges in allocation and management of financial, human and technical resources in the health sector; a highly-centralized HR management system; insufficient production and uneven distribution of HR; difficulties retaining

[1] Central Statistical Office, MOH, Tropical Diseases Research Centre, University of Zambia, and Macro International Inc. 2009. Zambia Demographic and Health Survey 2007. Calverton, Maryland, USA: CSO and Macro International Inc.

trained staff, especially in rural areas; need for more effective engagement of and support for formal and community-based structures and their linkage to the planning process; need to promote full participation of all sectors of the population in health behaviors and utilization of health services.

There were also large needs for in-service training to address the needs of new and evolving programs while pre-service curriculum revisions lagged behind. The health sector used a highly centralized system for approving training activities. The trainers were often employed at the central Ministry level and had many other responsibilities, causing tension between their role as trainers and their "real" job responsibilities. This caused significant challenges in conducting training activities.

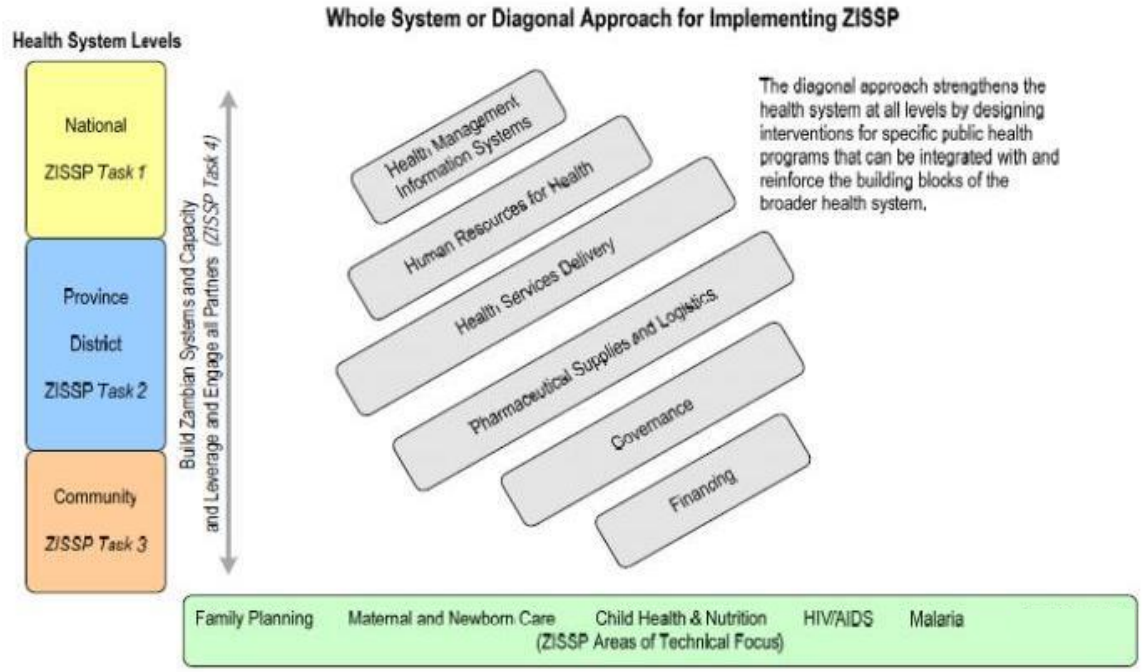
2. ZISSP OVERVIEW

Based on the health situation in Zambia in 2010, ZISSP worked in collaboration with the MOH and the MCDMCH to strengthen skills and systems for planning, management, and delivery of quality, high-impact health services at national, provincial, and district levels. ZISSP's work was organized under four tasks[2]:

- **Task 1:** Strengthen the ability of the MOH and MCDMCH at the national level to plan, manage, supervise and evaluate delivery of health services nationwide.
- **Task 2:** Improve management and technical skills of health providers and managers in provinces and districts in order to increase the quality and use of health services within target districts.
- **Task 3:** Improve community involvement in the provision and utilization of health services in targeted areas.
- **Task 4:** Ensure service delivery and other activities are effectively integrated at all appropriate levels in the health system through joint planning and in-kind activities with partners and appropriate public private partnerships.

The program's technical approach improved planning and management at each level of the health system and strengthened the specific program areas of HIV and AIDS, family planning, malaria, and MNCH and nutrition. Using this whole systems approach, ZISSP strengthened the supply and demand for high-impact health services and strengthened cross-cutting systems such as QI, planning, and HRH (Figure 1).

FIGURE 1: STRATEGIC APPROACH FOR IMPLEMENTING ZISSP



[2] The optional Task 5: Support for Global Hunger and Food Security Initiative was not funded by USAID.

Across all levels of the health system, ZISSP strengthened Zambian leadership, ownership, and capacity as a foundation of sustainability. This approach emphasized capacity building for the long term, complemented by activities that addressed immediate gaps in human resource capacity. Capacity-building was conducted by Abt Associates Inc. and six subcontractors responsible for specific capacity-building technical assistance areas (see text box).

The ZISSP Consortium

- **Abt Associates:** Lead organization.
- **Akros Inc.:** Strengthening the enhanced surveillance capacity of the National Malaria Control Program (NMCP).
- **American College of Nurse-Midwives (ACNM):** Developing skills labs at midwifery training institutions with the General Nursing Council and providing technical assistance in safe motherhood.
- **BroadReach Institute for Training and Education (BRITE):** Creating ZMLA with MOH and the National Institute for Public Administration (NIPA).
- **Johns Hopkins Bloomberg School of Public Health−Center for Communication Programs (JHU−CCP):** Strengthening behavior change communication (BCC) systems with particular focus on district and community stakeholder involvement in BCC.
- **Liverpool School of Tropical Medicine (LSTM):** Building entomological capacity of the NMCC for monitoring sentinel sites for malaria.
- **Planned Parenthood Association of Zambia (PPAZ):** Expanding MCDMCH and community capacity for ADH and family planning (FP) programs and service delivery.

National and provincial level capacity-building: ZISSP focused capacity building efforts within existing MOH and MCDMCH structures at the national and provincial levels to strengthen system-wide management and monitoring systems. ZISSP worked through MOH and MCDMCH TWGs, participatory fora for cooperation between the government and key stakeholders in specific technical areas. The TWGs support the MOH and MCDMCH to review, update and/or develop strategies, guidelines, curricula, and other key documents to support quality service delivery.

ZISSP also supported the MOH and MCDMCH to expand the numbers of trainers for various curricula and decentralized training capacity to provincial and district levels. ZISSP also expanded the number of provincial- and district-level staff with supervisory capacity. These persons provide long-term technical support supervision to trained managers and health workers and monitor adherence to the national policies, guidelines, and standards.

ZISSP seconded skilled clinical and managerial mentors to key positions at MOH and MCDMCH. Secondment was grounded in the principles of needs-based capacity building, targeted skills transfer, leadership development, and planned phase-out. An HRH Specialist seconded to the Directorate of Human Resources Administration (DHRA) of the MOH provided needs-based capacity building, targeted skills transfer, and management and leadership development within the MOH. Also in the area of HRH, a Technical Officer seconded to the MOH in 2012 and to the MCDMCH in 2013 built national-level capacity for efficient management of the ZHWRS, updated the ZHWRS database and payroll, and prepared contracts for new entrants to the scheme.

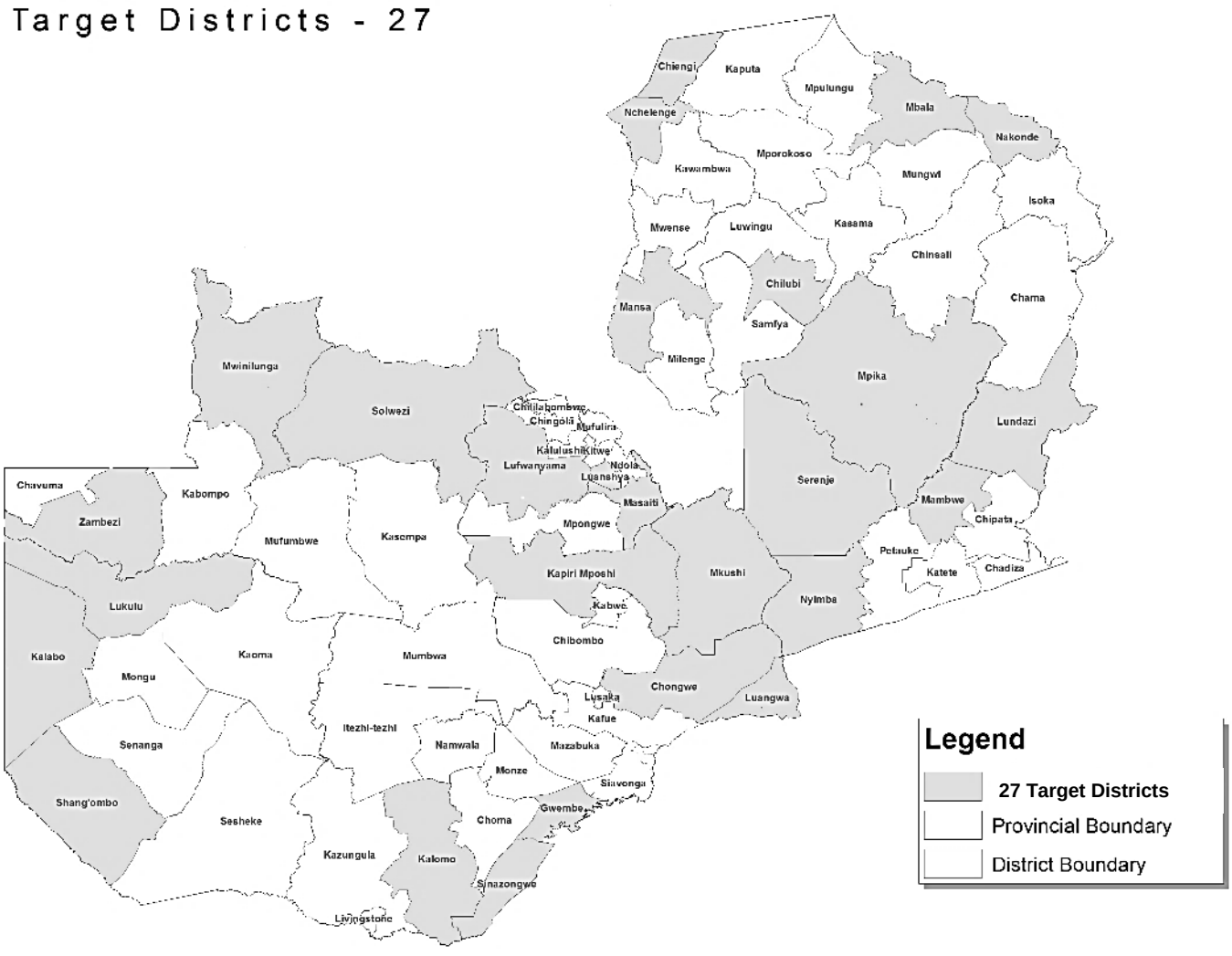
ZISSP seconded five persons to the National Malaria Control Center (NMCC) to provide focused technical support on IRS and entomology activities.

ZISSP seconded a FP Specialist and an EmONC Specialist to MOH in 2010, and both specialists shifted to MCDMCH in 2012 with realignment of the health sector. ZISSP also seconded an ADH Specialist to MCDMCH in 2012, which did not have any positions to coordinate ADH programs at the national level. ZISSP hired and seconded a Child Health Specialist to MOH, who later shifted to MCDMCH following government realignment, to strengthen the planning, implementation and evaluation of child health services. Seconded staff also strengthened Ministry capacity to hold regular TWG meetings.

At the provincial level, ZISSP seconded Clinical Care Specialists, Community Health Coordinators (CHCs) and Management Specialists to nine of ten PMOs. As part of their roles, the specialists provided technical assistance during the preparation and review of annual district work plans, facilitated technical trainings and technical support supervision and mentorship, participated in Performance Assessment (PA) activities, and supported coordination and implementation of activities in line with Ministry plans and priority areas. An additional person was seconded to the Eastern Province PMO to support provincial-level coordination and implementation of the Saving Mothers Giving Life (SMGL) endeavor.

District-level capacity-building approach: At the district, health facility and community levels, ZISSP worked within MCDMCH structures to improve quality and use of high-impact services within target districts. ZISSP specifically focused district-level interventions in 27 districts across ten provinces (Figure 2). These target districts were chosen in consultation with MOH in 2010 using a four-stage selection approach that took the following criteria into consideration: League table ranking, HRH capacity, MOH ranking of the districts into A, B, C and D according to the Living Condition Monitoring Survey, and collaborating partner involvement. ZISSP worked through the DCMOs to plan, oversee, and monitor the implementation of health activities at the district level. ZISSP also seconded four district-level coordinators to the Mansa, Kalomo, Nyimba and Lundazi DCMOs to support SMGL coordination.

FIGURE 2: DISTRICTS TARGETED WITH ZISSP SUPPORT



Health facility and community-level capacity-building approach: Within the target districts, ZISSP built capacity of health facility staff to provide quality, high-impact services integrated with primary health care services. The seconded CHCs promoted community involvement by providing technical support and mentorship to community organizations, committees, groups and volunteers that implemented community health activities and BCC initiatives in 27 districts. ZISSP targeted communities around 135 health facilities to improve the use and relevance of health services in communities by strengthening "bottom-up" community participation in developing health plans. At community level, ZISSP provided small grants to organizations to promote health prevention and use of health activities; worked through Health Center Advisory Committees (HCACs) and NHCs to strengthen community involvement in health planning; and built capacity of Community Health Workers (CHWs) and community health volunteers to promote, and in some cases, provide, health services.

To support cross-cutting capacity-building activities across ZISSP implementation, ZISSP employed a Capacity Building Specialist (CBS). The specialist provided technical guidance to ZISSP staff and TWG members in curricula development, adaptation, and reviews; monitored curricula implementation and provided on-site advice; and accompanied staff on post-training technical support visits to monitor training outcomes. The CBS also provided technical support and guidance to specific programmatic areas for the two Ministries. In the MOH, for instance, the CBS provided support in the review and development of the National Training Operational Plan. The CBS role included oversight of ZISSP's gender-sensitive programming approach and identification of gender- and age-related barriers to care that could be addressed through capacity-building. The CBS conducted gender-related trainings for Community Health Assistants at their training center in Ndola. ZISSP also produced a report entitled *Addressing Gender-Based Constraints to Health Service Uptake* for the MOH and MCDMCH to support strengthened gender-specific programming during health planning.

Photos: ZISSP used different strategies to build capacity across the health system. Clockwise from top left: Pre-service training for health workers; in-service training for health workers; in-service training for managers; on-site clinical mentorship; post-training technical support supervision

2.1 ZISSP MONITORING AND EVALUATION AND KNOWLEDGE MANAGEMENT

The ZISSP Monitoring and Evaluation (M&E) team set up and applied internal systems and processes for data entry, cleaning, data verification and management. The M&E team also provided technical support to grantee organizations in establishing data management systems. Throughout implementation, program staff and grantee organizations reviewed available data to measure their achievements against set targets and made program adjustments as necessary. The M&E team also reviewed terms of reference documents and supported the review process of multiple technical assessments and reports undertaken by ZISSP. (The reports are included in the table found in Annex 3). The team compiled quantitative data for required project reports and reviewed and summarized the findings of the mid-term evaluation report, identifying gaps and areas of concern raised during the evaluation. (A summary of the life of project quantitative achievements can be found in Annex 2).

To support knowledge management, ZISSP produced 12 program and technical briefing papers to document the accomplishments, lessons learned and recommendations of each major implementation area of the project. The project also published a compendium of 41 success stories that capture the impact of ZISSP's work through the eyes of health professionals and community members. All documents produced and/or updated with ZISSP support were disseminated at a close-out event in November 2014 to over 250 invited guests, including the Permanent Secretaries of the MOH and MCDMCH and the wife of the acting president of Zambia.

2.2 ZISSP FINANCE AND ADMINISTRATION

As of 13 December 2014, ZISSP spent a cumulative amount of US$ 84,984,449 against the total obligated funding of $ 84,984,449. Cumulatively, ZISSP spent 96.47 percent of the total project estimated ceiling of $ 88,092,613. An internal team managed the administration, finance, human resource, information technology and logistics requirements for timely and efficient implementation of activities. At the end of the project, ZISSP had 97 positions under the project, not including malaria program staff (who shifted to the Africa Indoor Residual Spraying (AIRS) project earlier in 2014) and not including staff supporting the project through the six subcontracting organizations. The department provided staff development in areas such as safety, ethics, computer skills, and compliance. The ZISSP information technology department not only supported the main office in Lusaka but also supported the information technology needs of the large cadre of seconded staff in provinces through creation of partnerships with PMO information technology staff to collaborate in the provision of trouble-shooting support.

3. ZISSP RESULTS

Task 1: Strengthen the ability of the MOH and MCDMCH at the national level to plan, manage, supervise and evaluate delivery of health services nationwide.

1.1 Human Resources for Health

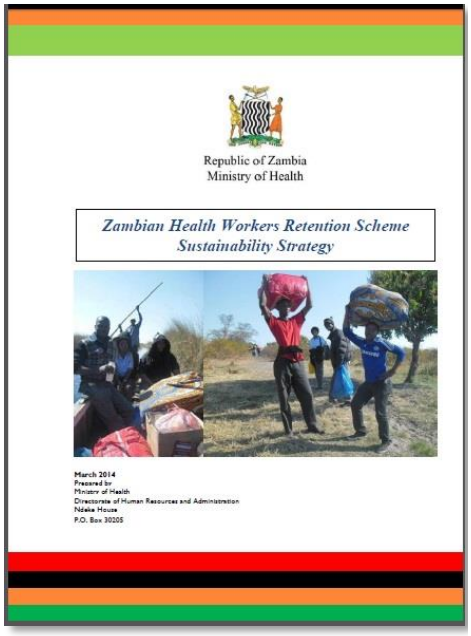
How we found it: The MOH launched a five-year national HRH Strategic Plan (2011 – 2015) to address multiple challenges throughout the human resource (HR) system. The HRH Strategic Plan and the findings of a 2010 gap analysis study, conducted with ZISSP support, highlighted opportunities to strengthen specific components of the MOH HR system that could improve HR management across the central, provincial, and district health offices and within the hospitals and health facilities. The MOH endeavored to promote evidence-based planning and decision making through the establishment of a functional and comprehensive HRIS. The MOH also aimed to strengthen HR management coordination and to improve productivity of HR staff across all levels of the health system. The MOH strived to strengthen an enabling environment for optimal performance and productivity and to launch the government-wide Performance Management Package (PMP) and the Annual Performance Appraisal System (APAS). The MOH felt that evaluation of the implementation of the ZHWRS, plus resolving management and monitoring challenges, could provide information necessary to identify long-term plans for financial sustainability of the scheme.

Improved HR management impacts distribution, motivation, retention, and performance of all cadres of health professionals across the health system.

Major accomplishments: To enable the DHRA to generate more accurate reports for HR decision-making, ZISSP supported workshops to clean the data on the Payroll Management and Establishment Control (PMEC) database. The data cleaning exercise identified 723 cases with locked salaries ("ghost workers"), a discovery that had significant financial and planning impact for the MOH. The updated data in the PMEC system assisted the MOH to realign staff according to the revised organizational structure. ZISSP also provided technical and financial support to the MOH to develop a tailor-made, standardized HRIS and to roll out the system to all MOH provincial offices and hospitals. ZISSP also supported the production of a customized HRIS for MCDMCH and an initial training of 83 MCDMCH staff (39 males, 44 females). As of August 2014, MCDMCH had completed a pilot of the system at five locations (three DCMOs and two district hospitals).

ZISSP developed a PMP implementation strategy and plan for the MOH and funded two workshops to develop job descriptions for staff positions. Using ZISSP and government funds, the MOH trained 134 central and provincial-level trainers, who cascaded training to 472 provincial and district-level MOH staff (272 males, 200 females). ZISSP supported government monitoring visits to nine provinces for PMP technical support and monitoring, which verified implementation of the PMP, evaluated work plans, and provided on-the-spot technical advice. With the successful roll-out of the PMP, the MOH reported 80% utilization of the APAS in 2014 for assessing staff performance for MOH institutions and facilities.

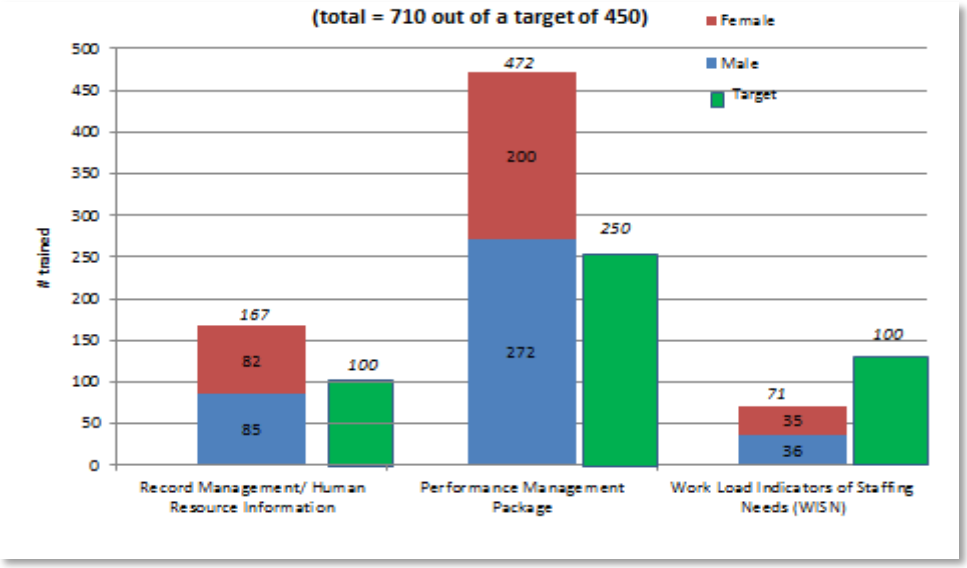
The ZHWRS, launched in 2003, posts multiple health cadres to rural and hard-to-reach health facilities, offering both monetary and non-monetary incentives for a fixed contract period of three years. To support health-facility-level implementation of the ZHWRS, ZISSP supported the retention allowances for 119 workers (40 females, 77 males) through January 2014. The health workers, posted in ZISSP's 27 target districts, consisted of 27 medical officers, 80 nurses, and 12 clinical officers. ZISSP supported the MOH and the MCDMCH to undertake audits of the ZHWRS in all provinces, which verified the existence of staff on the ZHWRS at the facilities designated as hard-to-reach. The audit revealed cases of under- and over-payment, and established those owed end-of-contract gratuities by the scheme. The audit visits were also used as an opportunity to distribute the ZHWRS guidelines and forms to the HR officers. Following the results of the audit, ZISSP's support for retention allowances reduced to 82 members for the period July to December 2013.



ZISSP undertook an evaluation of the ZHWRS in 2013 for the MOH, which reviewed the performance of the scheme and recommended improvements. Based on findings of the evaluation, ZISSP provided both technical and financial support to the MOH for production of the *ZHWRS Sustainability Strategy*, which was adopted by the HRH TWG and top management at the MOH and MCDMCH. The *ZHWRS Sustainability Strategy* provides the government with a strategic policy direction towards the implementation of an efficient, cost effective and sustainable retention scheme for health workers working in the rural and hard-to-reach areas in Zambia.

The decentralization of certain HR functions to the provincial and health facility levels, a change authorized by Cabinet in January 2012, provided more responsibility, authority, control and power to lower-level HR staff. ZISSP built the capacity of 710 HR staff across different levels of the health system in HRH-related capacity building programs (PMP, Workload Indicators of Staffing Needs (WISN), HRIS, HRH management and planning, and records management) (Figure 3). This exceeded the life project target of 450 because ZISSP had originally planned to roll out the PMP to provincial level, but actually rolled out the training to districts and hospitals. The central level received further leadership capacity-building through the ZISSP sponsorship of five senior staff from the MOH DHRA at the Harvard training on "Strengthening Human Resources for Health" to learn new and innovative ways of addressing human resource policy and management issues.

FIGURE 2: NUMBER OF PEOPLE TRAINED UNDER VARIOUS HRH-RELATED CAPACITY BUILDING PROGRAMS WITH ZISSP SUPPORT



To improve organizational performance, the DHRA introduced quarterly performance review meetings with ZISSP support. During the meetings, HR staff from all levels assessed and monitored their own performance against annual work plans and the performance targets of the HRH Strategic Plan (2011 – 2015). The new opportunity to share challenges and best practices with colleagues across different levels of the HR system improved communication, teamwork and collaboration. A key decision made through the quarterly performance review meetings resulted in expedited clearance of numerous HR cases that had been pending for months or years. The change in the performance of the DHRA was noted through a letter of commendation from the Public Service Commission at Cabinet Office for the effective and efficient processing of human resource cases, encouraging the Directorate to sustain the same levels of performance.

How we left it:[3] The improved productivity of the DHRA as compared to 2010 can be attributed to the ownership and leadership by DHRA of the capacity-building initiatives introduced with ZISSP's technical and financial support. ZISSP anticipates that this top-level leadership will continue the momentum to sustain HRH systems, processes, tools and activities that were supported by ZISSP. This includes the future roll out of the WHO-designed WISN tool, using the foundation of 71 MOH staff (36 males, 35 females) from the national and provincial levels and from major hospitals who were trained as WISN trainers with ZISSP support. Implementation of the WISN will assist the two ministries to develop evidence-based staffing structures for all health facilities based on workloads.

The MOH is also poised to sustain use of the HRIS. To continue to expand use and build functionality of the HRIS, the MOH should procure computers for health facilities and institutions; link the HRIS to the PMEC system; make the HRIS web-based for access to real time staffing data and reports for decision-making; and integrate the MOH and MCDMCH HRIS with other HRIS that may exist in the health sector regulatory boards.

[3] For more information, refer to the ZISSP Program Brief entitled *Strengthening Systems for Human Resources for Health.*

ZISSP took initial steps to extend HRH capacity-building to the MCDMCH following the realignment of government health portfolio functions in 2011. The MCDMCH can continue to learn from the MOH and advocate for resources to scale up the HRH activities, such as the PMP/APAS and HRIS, and continue to strengthen HR processes and systems. The future HRH policy discussions by the MOH and MCDMCH will be supported by a strengthened HR TWG, which is functioning under updated terms of reference and with reorganized subcommittees aligned with the HRH Strategic Plan objectives.

Participants from national, provincial, district, and hospital levels at a quarterly performance review meeting.

The limiting factor for sustainability could be the financial capacity to continue implementation of some activities, such as the quarterly performance review meetings. In addition, the lack of financial sustainability in the long term of the ZHWRS policy is of great concern. The operationalization of the *ZHWRS Sustainability Strategy* is a next step required by the government to formulate policy direction for the future of the ZHWRS in order to address the critical shortage of health workers in targeted areas.

1.2 Maternal, Newborn and Child Health and Nutrition

How we found it: At the start of ZISSP, the MOH had just completed the review of the Fourth National Health Strategic Plan and had finalized the *National Food and Nutrition Strategic Plan for Zambia 2011-2015*. These strategies identified specific interventions, guidelines and training manuals that required updating to guide implementation of child health and nutrition services. The National Health Strategic Plan (2011-2015) identified key strategies to improve MNCH and nutrition outcomes. These included strengthening safe motherhood services (family planning, focused antenatal care, postnatal and newborn care; and EmONC; improving visibility of ADH services; developing and implementing a comprehensive strategy for ADH; scaling up immunization coverage; and strengthening implementation of reproductive health, IMCI, and nutrition services. The MCDMCH also aimed to strengthen community involvement in MNCH and nutrition services to encourage health-seeking behaviors at the individual, family and community levels. The MOH recognized that addressing specific systems and capacity gaps across various levels of the health system (national, provincial, district, health facility and community) could accelerate achievement of the Strategic Plan targets and contribute to benchmarks of Millennium Development Goals #4 and #5.

MDG #4 and #5 aim to reduce child and maternal mortality, respectively.

Major accomplishments: ZISSP's support to MNCH systems strengthening focused on five program areas: FP, ADH, EmONC, newborn and child health, and nutrition. Across all five program areas, ZISSP facilitated the development and/or updating of multiple strategic plans, guidelines, and training packages through a consultative process with the respective TWG members in each program area. ZISSP provided financial and technical support throughout the process, which included coordination of the review processes, funding stakeholder meetings, hiring technical experts as consultants, conducting focus group discussions with stakeholders, formatting and printing final documents, and strengthening dissemination through national launches and across provinces and districts. (A complete list of documents developed with ZISSP support can be found in Annex 3.)

Family planning: ZISSP expanded LAFP availability by training 391 health providers (114 males and 277 females) (exceeding the life of project target of 260) in the knowledge and skills to safely insert and remove Jadelle (implants) and intrauterine contraceptive devices. The training also strengthened health workers' skills to educate and counsel women about LAFP methods to increase demand. At the community level, ZISSP supported the scale-up of the CBD program, a priority under the National Health Strategic Plan. Training built the knowledge and skills of 534 CBDs (269 males, 265 females) (exceeding the 450 life of project target) from 21 districts to distribute oral contraceptives and condoms. The increased access to LAFP and CBD services contributed to expanded access to and choice of FP methods and is expected to increase FP uptake. These outcomes will contribute to MCDMCH's *Eight-Year Scale–up Plan*, which aims to increase the contraceptive prevalence rate for modern methods from 33 per cent in 2007 to 58 per cent by 2020.

A nurse removes Jadelle with supportive supervision from her LAFP trainer.

Adolescent health: According to the *2009 ADH Situational Analysis Report*, only 10 percent of health facilities had functional youth-friendly centers. ZISSP worked with MCDMCH to increase availability and access to adolescent reproductive health services in Mpika and Nakonde districts. The districts were selected as model districts based on the presence of existing structures, such as Youth Friendly Health Corners, to provide expanded ADH services. Working through these structures, ZISSP increased the number of trained peer educators and health care workers and improved their skills to provide sexual and reproductive health information with adolescents and young people. This enabled the government to observe lessons about scalability and outcomes of the peer education program. ZISSP trained 102 health care workers (42 males, 60 females) in ADH from 37 health facilities in Nakonde and Mpika districts. At community level, ZISSP trained 136 peer educators (65 males, 71 females); 45 of these (21 males, 24 females) received additional training in community theater to mobilize and educate adolescents for health services.

Trained peer educators educate youth about reproductive health behaviors and services.

Emergency Obstetric and Newborn Care: ZISSP equipped 369 health workers (159 males, 210 females) (exceeding the target of 340) from 25 districts to manage emergency obstetric complications with skills such as neonatal resuscitation, assisted breech and vacuum deliveries, management of shock and post-partum hemorrhage, and use of magnesium sulphate for the management of eclampsia, all of which contribute to a reduction of maternal and neonatal morbidity and mortality in Zambia. In addition, 15 medical doctors received mentorship in emergency obstetric surgery. ZISSP's training of medical doctors improved their surgical skills and built capacity for district hospitals to manage certain obstetric cases in order to reduce unnecessary referrals and improve timely surgical intervention. Finally, to further support scale-up of EmONC training, ZISSP also provided financial support for MOH to assess, select, and equip two provincial hospitals (Chipata and Kitwe) as EmONC training sites, bringing the number of national training sites to four.[4]

Nine midwifery schools upgraded their skills labs with ZISSP support.

ZISSP worked with the General Nursing Council and MOH to upgrade skills labs (also called demonstration rooms or simulation labs) at nine midwifery schools to help students quickly and safely achieve competency prior to caring for clients in the clinical setting. ACNM procured and distributed models and equipment, supported the training of 40 tutors and clinical instructors in skills lab management, and provided post-training technical supportive supervision. The use of simulations in the labs enables midwives to develop critical thinking skills, preparing them to quickly respond to and manage emergency obstetric complications at their posts.[5]

Child Health: Across RED and IMCI activities, ZISSP reached 1395 people with capacity-building in these areas, which significantly exceeded the life-of-project target of 442. Through the Expanded Program on Immunization, the MOH and MCDMCH adopted the use of the WHO's RED strategy, which aims to improve the planning and organization of immunization services. The strategy's five components promote partnerships between districts, health care providers and communities to improve access to and utilization of services. ZISSP trained 825 DCMO and health facility staff members (419 male, 406 female) in RED from 51 districts across the country. At provincial level, ZISSP supported the creation of core groups to focus on EPI. The groups monitor immunization coverage and provide technical support to districts.

The RED strategy improves immunization coverage rates across districts.

ZISSP specifically focused on strengthening the RED strategy in 16 districts with high numbers of children not immunized with DPT3. ZISSP further strengthened community involvement to support immunization coverage through training of 216 community volunteers (165 males, 51 females). Trained community volunteers used Community Child Health Registers, a tool developed with ZISSP support, to track defaulting children and link them to the health system for immunization and other child health services. While the primary focus of the RED strategy is to improve immunization coverage, tracking of interventions

[4] For more information, refer to the ZISSP technical brief entitled In-service Training of Health Providers in EmONC.
[5] For more information, refer to the ZISSP technical brief entitled Improving Skills Labs to Strengthen Midwifery Pre-Service Education.

using the community register goes beyond immunization, and includes interventions such as Vitamin A supplementation for lactating mothers, continuum of care for HIV-positive mothers, growth monitoring and promotion, correct fever treatment as reported by mothers, and household water and sanitation practices. The breadth of information in the register helps community volunteers to select health education topics and develop annual community action plans. ZISSP's scale up of the RED approach has resulted in progressive improvements in immunization coverage rates in targeted districts.[6] The results have contributed to improvement of the nationwide immunization coverage. Full DPT3 vaccination coverage of Zambian children under 23 months increased from 80% in 2007 to 86% in 2013.[7]

ZISSP also provided financial support for nationwide events that promote child health and nutrition. ZISSP supported the MOH/MCDMCH biannual Child Health Week activities in 20 districts across five provinces, selected on the basis of their low coverage in DPT3, measles vaccine, and Vitamin A supplementation. ZISSP provided technical and transportation support to central- and district-level government offices to help with distribution of supplies and M&E. ZISSP also supported MCDMCH during the integrated under-15 year olds' measles campaign in 2012 by providing technical and financial support for preparation, resource mobilization, adaptation of training materials, health worker training, and monitoring. The campaign reached 7.5 million children under 15 years and exceeded the target by 16%. The government also exceeded targets for children under five years of age receiving Vitamin A supplementation and the targets for oral polio vaccine.

ZISSP provided financial and technical support to the MOH and MCDMCH to train a total of 570 health care workers in IMCI (296 males, 274 females) from 41 districts. Follow-up visits in 26 districts found that trained health workers demonstrated improved assessment, classification and treatment of sick children. IMCI capacity-building enabled 25 districts to achieve their target of 80 percent of health workers trained in IMCI.

ZISSP supported the MCDMCH to introduce IMCI training to nursing schools through the adaption of the WHO's IMCI Computerized Adaptation and Training Tool (ICATT). ZISSP trained 48 tutors (22 males, 26 females) selected from 28 public and private nursing schools as ICATT facilitators. ZISSP also produced 100 ICATT DVDs, distributed by MCDMCH to all public and private nursing schools and three private universities.

ZISSP, in collaboration with the MCDMCH, conducted an assessment of Oral Rehydration Therapy (ORT) corners in Kalomo District of Southern Province. The general objective of the assessment was to determine the existence and functionality of ORT corners in selected health facilities in Kalomo District, to document the impediments to implementing ORT corners, and to make recommendations for establishment of a comprehensive ORT Corner to integrate other child survival interventions. To support ORT corner revitalization, ZISSP targeted 38 health facilities in Kalomo District. The projected donated ORT equipment and trained 20 health workers (9 males, 11females) and 30 Classified Daily Employees and community volunteers (15 males, 15 females) in ORT corner management in 2013. Monitoring visits observed that 36 health centers established well-organized ORT corners.

[6] Based on data tracked using facility-based monitoring tools, as observed during mentorship visits.
[7] Ministry of Health. Preliminary key findings: 2013-14 *Zambia Demographic and Health Survey*. Presented in Lusaka, Zambia on 1st October, 2014. Slide 15.

Nutrition: ZISSP provided financial and technical support to the MCDMCH to conduct technical trainings for 625 health workers (307 males, 318 females) in IYCF in 27 ZISSP target districts (slightly below the target of 682). ZISSP also trained 855 community volunteers (409 males, 446 females) to provide community IYCF education, counseling and referral services to complement facility-based nutrition services. This exceeded the community IYCF target of 540 trained volunteers. The IYCF-trained health workers and community volunteers had the knowledge and skills to counsel caretakers of children below the age of two years on how to prevent malnutrition through the provision of nutrition-focused support and emphasis on child feeding.[8] These interventions are slowly reversing the trend of malnutrition in children under five. Although still unacceptably high, stunting of children under five years has decreased by 5% between 2007 and 2013-14.[9]

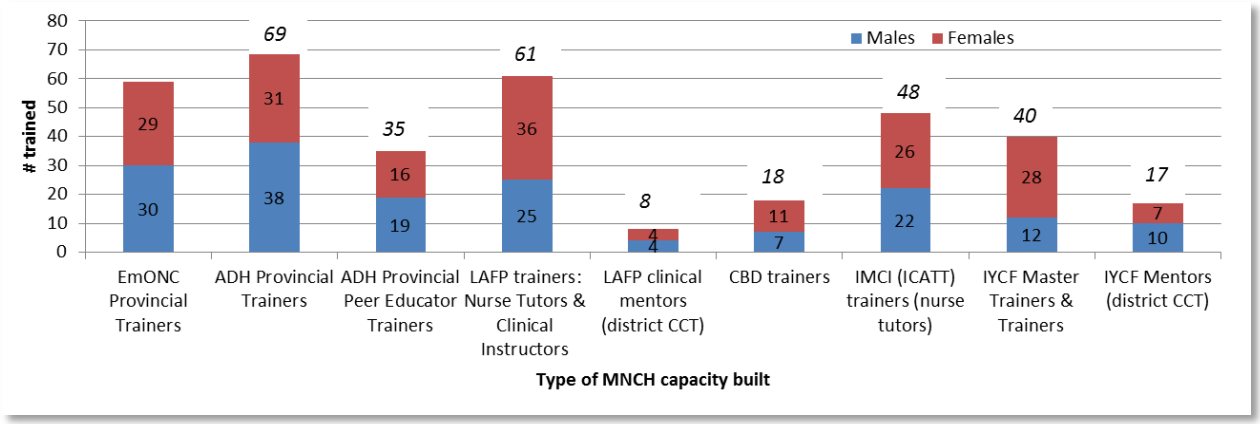
Trained volunteers counsel mothers about IYCF practices.

ZISSP also supported breastfeeding activities at national and provincial levels during the annual commemoration and launch of breastfeeding week. Specifically, ZISSP supported planning and monitoring activities at national level and two PMOs to launch the commemoration of the provincial activities in two rural communities in Kabwe (2011) and Lundazi (2013) districts. The launch directly benefited community members by providing messages on successful breastfeeding and optimal complementary feeding practices. ZISSP also supported the MCDMCH to conduct an assessment of the Baby-Friendly Health Facility Initiative (BFHFI) in five districts where ZISSP had conducted IYCF capacity-building activities (Mbala, Mpika, Solwezi, Mwinilunga and Masaiti). Findings indicated that none of the 25 facilities met the criteria to attain baby-friendly status. Six facilities were close to meeting the criteria and 19 facilities would need substantial technical support to improve performance.

Strengthened training, supervision and mentorship capacity in MNCH: Across all five program areas, ZISSP expanded the ability of PMOs and DCMOs to provide ongoing technical training and strengthened capacity for supportive supervision and mentorship. Between 2010 and 2014, ZISSP trained 395 trainers and mentors in MNCH program areas across the country (167 males, 188 females, and 40 unspecified gender[10]) (Figure 4). The capacity reached all provinces. With a larger pool of trainers, the MOH and MCDMCH had improved capacity to provide training in any district and achieve national scale up plans. In addition to conducting classroom training, the trainers also provided on-site mentorship to health workers and community members six weeks after the formal training. During the on-site visits, the trainers and supervisors assessed application of new knowledge and skills; provided technical supportive supervision and mentorship; and addressed specific challenges that the trained providers were experiencing. Follow-up visits also helped to motivate the health workers to establish integrated case management practices at the health facility.

[8] For more information, refer to the ZISSP technical brief entitled Improving Community Capacities in IYCF.
[9] MOH. Preliminary key findings: 2013-14 *Zambia Demographic and Health Survey*. Presented in Lusaka, Zambia on 1st October, 2014, slide 21.
[10] ZISSP trained 40 nurse tutors and clinical instructors in skills lab management. The numbers are not included in the table as the gender breakdown is not available.

FIGURE 3: NUMBER OF TRAINERS, TUTORS AND MENTORS TRAINED IN MNCH WITH ZISSP SUPPORT (TOTAL = 395)



How we left it:[11] Strategic documents, such as the *IMCI Strategic Plan (2010 – 2015)*, will continue to guide implementation of MNCH activities by the MOH and MCDMCH. In particular, vigorous operationalization of the *ADH Communication Strategy* and *ADFHS Standards and Guidelines* will support the Mid-Term Expenditure Framework (2015-2017) goal of integrating youth-friendly health services in communities, schools, churches and health facilities. MCDMCH should continue to disseminate the various MNCH guidelines to districts and provide orientation to health workers. Specific guidelines recommended for dissemination include the *Maternal, Adolescent, Infant and Young Child Nutrition (MAIYCN) Guidelines, the Essential Newborn Care Guidelines*, and the updated national policy on HIV and infant feeding.

Trained volunteers partner with health centers to expand nutrition services into communities.

ZISSP interventions will be sustained through strengthened coordination and monitoring between DCMOs, health facilities and communities. ZISSP's support to MOH and MCDMCH enabled training of 2,972 health workers and 1,605 community volunteers to expand MNCH service delivery (Figures 5 and 6). These trained personnel are providing services, but need support from MCDMCH with job aids and forms related to child health, including under-five cards, community out-patient registers, acute respiratory infection timers; effective vaccine management and immunization stock control cards; and job aids for Community-IMCI.

[11] For more information on ZISSP's MNCH interventions, refer to two ZISSP program briefs: *Systems Strengthening to Improve Child Health and Nutrition Services* and *Systems Strengthening to Improve Uptake and Delivery of Reproductive Health Services.*

FIGURE 4: NUMBER OF HEALTH WORKERS TRAINED IN MNCH WITH ZISSP SUPPORT (TOTAL 2972)

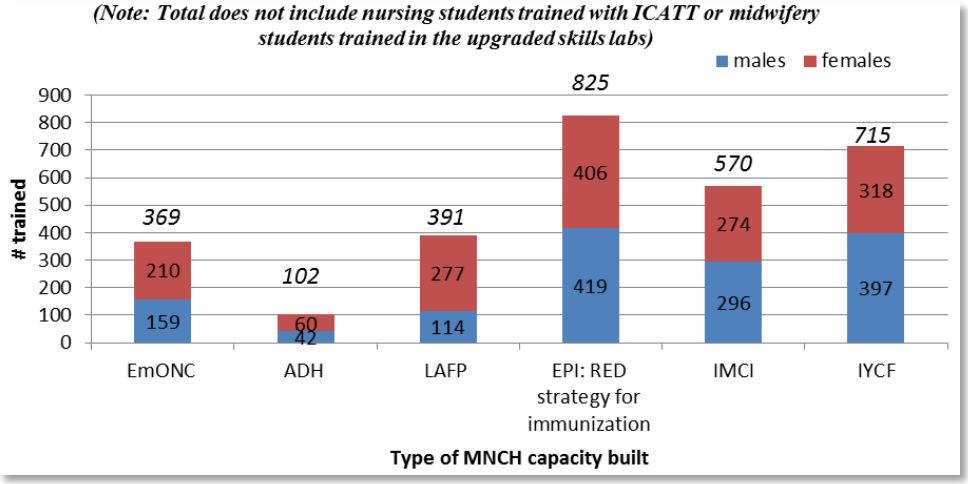
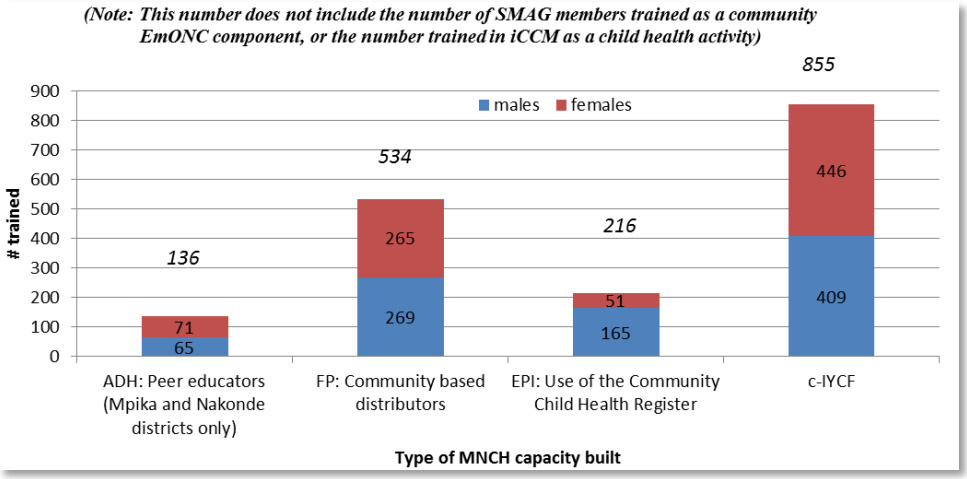


FIGURE 5: NUMBER OF COMMUNITY VOLUNTEERS TRAINED IN MNCH WITH ZISSP SUPPORT (TOTAL 1605)



For future expansion of capacity-building, national curricula and pools of trainers are available across the five MNCH areas to support training in any district. Districts and health facilities that received ZISSP support in RED, ORT Corners, BFHFI, and ADH activities can be used as as models to scale up MCDMCH strategies.

ZISSP transitioned the responsibilities of seconded staff to an ADH Specialist, a Principal FP Officer, and a Chief FP Officer at the MCDMCH. MCDMCH had also funded an EmONC Specialist position to coordinate the respective programs. ZISSP also handed over the strengthened TWGs to new MCDMCH staff. The EmONC TWG, which was almost non-functional in 2010, was holding monthly meetings at MCDMCH by 2014 and had strengthened partner coordination and leverage of resources, contributing to better coordination of EmONC activities at all levels. The ADH TWG was revamped. The FP TWG has updated terms of reference, with over 40 members participating in monthly meetings in 2014, and the TWG had developed and now coordinates the Eight-Year Family Planning Scale-up Plan for Zambia. The Child Health TWG improved dissemination of minutes, enabling timely follow-up of recommendations, and introduced technical presentations on new emerging issues. However, the Child Health TWG sub-committee meetings were not regularly held, which increased the length of the main TWG meetings. In the fifth MNCH area of nutrition, ZISSP

recommends that the MCDMCH revitalize the Nutrition TWG in order to improve partner coordination and leveraging of resources.

Task 1: ZISSP Integration Highlight

Improving child nutrition service delivery in a hard-to-reach district of Zambia
Training strengthens IYCF practices in Shang'ombo

Dr. James Changwe and nineteen other health workers arrived at the first day of training in child nutrition. As they perused the six-day workshop agenda, the participants wondered why this training focused so much on breastfeeding. Didn't almost every new mother in Zambia breastfeed? What was the role of a health facility in this widespread practice?

As the week progressed, participants updated their knowledge and skills on IYCF, learning and practicing new skills to support evidence-based breastfeeding and complimentary feeding practices. As part of their lessons, participants learned how to assess facilities to see if they are "baby friendly" in line with WHO guidelines. To achieve "baby friendly" status, a health facility or hospital must meet 13 criteria demonstrating that the health facility systems and staff actively support breastfeeding initiation and continuation without introduction of other complimentary foods until the infant reaches six months of age.

On the third day of the training, the participants visited Shang'ombo District Hospital to demonstrate their new knowledge and skills in IYCF. The newly-trained health workers counseled mothers of infants and young children, and also supported ten new mothers in the post-natal ward with breastfeeding. One of these women had just delivered her first child an hour earlier. She struggled to feed her baby, not knowing how to position the baby while lying down. With support from the visiting health worker, the woman was assisted to lie down comfortably and successfully fed her baby.

Following the training, the health workers returned to their posts at the district hospital and at 15 clinics in Shang'ombo District (many in rural, hard-to reach areas) to integrate their new IYCF skills into routine services provided to mothers of young children. To support the IYCF initiative at district level, the training also included one participant from the DCMO, who will continue to monitor IYCF service delivery and implementation of "baby friendly" practices across the district.

Health workers practice new breastfeeding counseling skills during a visit to the maternity ward of Shang'ombo District Hospital.

Sixteen health workers in Shang'ombo District were supported by ZHWRS in 2012. ZISSP supported allowances of some of these workers, strengthened higher-level management of the scheme, and built health worker and community capacity to deliver quality MNCH services.

Task 2: Improve management and technical skills of health providers and managers in provinces and districts in order to increase the quality and use of health services within target districts.

2.1 Clinical Care: Quality Improvement and Clinical Mentorship

How we found it: QI systems engage appropriate strategies and quality management tools to close the gap between current and expected levels of quality. The QI system and strategies yield sustainable, high-quality health service delivery outcomes. In 2011, the Zambia Integrated Systems Strengthening Program (ZISSP) collaborated with the MOH and other cooperating partners to form the national QI TWG to serve as a national-level forum where government representatives and stakeholders facilitating QI in various health programs could meet regularly to discuss QI program implementation and coordination.

Clinical mentorship is a key strategy of quality improvement programs.

A review of implementation of QI and clinical mentorship by the QI TWG in 2011 revealed challenges. The QI program and the clinical mentoring strategy were implemented by various MOH partners who used different approaches, curricula, and implementation tools despite the fact that they targeted the same health workers. The MOH had no QI operational guidelines, while the existing operational guidelines for clinical mentorship were tailored specifically to HIV service delivery. Lack of operational guidelines to guide the implementation process contributed to the failure to sustain the earlier on QA committees that were established during the health reforms in in the 1980s. The QI program did not have training manuals for facilitators and participants. The training of health workers in QI and clinical mentoring were facilitated from the national level, which delayed quick scale up of both the QI program and its clinical mentoring strategy. Clinical mentors were also based at the national level and could not regularly support health workers at the primary health care level. There were no structures at PMO, DCMO and health facility levels through which to implement QI efforts and clinical mentoring of health workers to enhance the quality health service delivery.

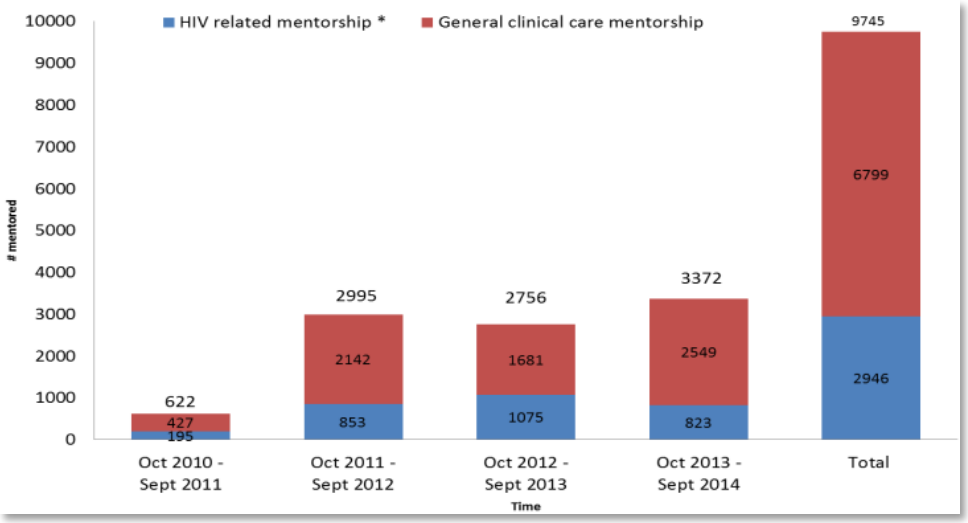
Major accomplishments: In view of these challenges ZISSP, working through the QI TWG, supported the MOH to institutionalize the QI system horizontally across all aspects of service delivery and at each level of the health system (national, provincial, district, and health facility). Working through the QI TWG, ZISSP supported the development of the QI operational guidelines to create a common understanding of QI among health workers at all levels and also among stakeholders. The TWG also developed QI training materials, which are aligned with the QI operational guidelines and with the government's bi-annual PA strategy. The training content equips QI implementers with skills to identify and effectively implement QI projects in various fields at all levels. The TWG also identified five key QI indicators and developed QI project implementation, supervision, monitoring and evaluation tools.

Working through the QI TWG, ZISSP supported the MOH to decentralize training in QI to the provinces. The MOH, with ZISSP support, trained 64 provincial QI trainers, who rolled out training to 1,028 health program managers and health service providers (610 males, 418 females) at all levels in all the ten provinces. In collaboration with the TWG and provincial clinical care specialists, ZISSP supported the MOH to establish QI committees at the provincial, district and health facility levels.

These structures facilitated the identification of health service delivery gaps and applied QI processes to address the gaps and improve quality. QI job aids, developed with ZISSP support, equipped QI implementers with handy visual reminders to assist them to identify and effectively implement QI projects.

As part of the process of strengthening the QI system, ZISSP collaborated with MOH and other stakeholders in an ad hoc group in 2011 to develop *Guidelines for Clinical Mentorship of Health Care Workers in Zambia* and a cross-cutting clinical mentorship training package for multi-disciplinary cadres in the health system. ZISSP supported the MOH to train 24 mentor trainers drawn from all provinces. The trainers trained 706 multi-disciplinary mentors countrywide. Using this new cadre of mentors, ZISSP worked with the MOH to establish Clinical Care Teams (CCTs) at provincial and district levels. The multi-disciplinary teams were composed of clinicians, pharmacists, laboratory technologists, nurses, nutritionists, etc. and therefore could respond to a wide range of mentorship needs across horizontal programs and across various health systems building blocks (e.g. service delivery, pharmaceutical supply chain management, diagnostic services, and health information management). ZISSP also supported development of subject-specific mentoring tools and treatment flow charts and job aids for selected clinical conditions as mentoring tools for health workers.[12] With ZISSP support, provincial and district CCTs conducted 9,745 clinical mentoring sessions in all provinces to 5,764 health workers (3,034 males, 2,730 females). This exceeded the life-of-project target of 9,200 mentorship sessions (Figure 7).

FIGURE 6: NUMBER OF HEALTH WORKERS RECEIVING MENTORSHIP, OCTOBER 2010 TO SEPTEMBER 2014, DISAGGREGATED BY HIV AND NON-HIV SPECIALTY AREAS



*HIV related mentorship is a total of the following areas: Male circumcision, pediatric treatment, adult treatment, counseling and testing, PMTCT, lab, blood safety, other prevention, prevention with positives, and supportive care.

With the introduction of QI committees, the CCTs became an integral strategy for the QI program at provincial and district levels. Many of the QI gaps that were identified in health service delivery required clinical mentorship. The QI Committees at each level would then request the provincial or district CCT to assign appropriate mentors to address the identified service delivery gaps. Other health system processes, such as PA, also utilized CCTs to address performance gaps. The CCTs identified appropriate mentors within the teams to address the specific mentoring need. The outcomes of mentoring were then monitored and evaluated by the health facility QI committees as part of their QI project implementation process.

[12] Internal Medicine; Surgery; Pediatrics; Obstetrics and Gynecology; Psychiatry; Anesthesia; Physiotherapy; Ear, Nose and Throat; Oncology; Nursing Care; Radiology.

The creation of QI committees and CCTs opened new opportunities for continuous learning and performance analysis at provincial, district and health facility levels. ZISSP supported the provincial and district QI committees, in collaboration with the CCTs, to facilitate maternal and under-five mortality reviews. ZISSP also supported 508 clinical meetings held at hospital and health center levels across the ten provinces. Critical analysis of mortality case records served as an entry point to identify performance gaps for QI projects. It also assisted in identifying capacity gaps that could be targeted with mentorship by CCTs.

ZISSP supported Provincial Quarterly Program Performance Review Meetings, provincial CCT meetings, and district CCT meetings to review Health Management Information System (HMIS) data on selected health indicators. The reviews identified health service delivery gaps that could be addressed through mentorship. The meetings also served as an opportunity for provincial and district health program managers to strengthen skills in analyzing HMIS data for use in programmatic decision-making.

How we left it:[13] ZISSP contributed to the creation of a harmonized QI system across all levels of the Zambian health system. At national level, the QI TWG is active and functional, although MCDMCH has not been fully engaged. Operational guidelines and training packages are in use. QI committees are established at all levels in each of the 10 provinces and are functional to varying degrees, with some of them using QI principles for problem solving through QI projects.

A mentor demonstrates IMCI skills during a mentorship session at St. Paul's Hospital in Nchelenge District.

A 2014 evaluation of ZISSP's QI systems strengthening intervention found that service providers and local political actors appear to support the QI activities. Moreover, health workers and managers perceive that integrating QI in health service delivery has assisted them to deliver quality health services to their communities. The QI program has equipped them with tools, knowledge and skills for problem solving which has enhanced team work. ZISSP produced a two-volume document, Improving Quality Using a Health Systems Approach: The ZISSP Experience, to provide the MOH and MCDMCH with additional information about the QI program and guide future direction. The first volume assesses QI in Zambia through ZISSP support to the MOH, and the second volume documents ZISSP's QI experience using a case study approach in four selected health facilities based in different provinces.

As a component of QI, decentralized CCTs at provincial and district level were able to successfully conduct thousands of mentorship sessions with health workers across the country. The mentorship covered a wide range of clinical areas and supportive functions, without taking people away from the workplace. Development of a comprehensive, cross-cutting structure increases the likelihood that the initiative will be institutionalized and sustained compared to a centralized and vertical mentorship program. However, CCTs are functional to varying degrees in different provinces. These will need further strengthening with a focus on engaging PMOs and DCMOs to make use of these provincial and district CCTs. In addition, mentorship for specific programs appears fragmented and in silos. For instance, not all mentors from EmONC and IMCI are part of the CCTs.

To further promote integration of QI and clinical mentorship into district-level structures, ZISSP supported meetings with district-level Clinical Care Officers (CCO) in four provinces to orient CCOs on their roles and responsibilities as coordinators of QI and clinical mentorship. Through the

[13] For more information, refer to the ZISSP program brief entitled Standardizing and Scaling Up Quality Improvement and Clinical Mentorship in the Zambian Health System

meetings, the CCOs became conversant with the QI coaching materials and mentorship tools. CCOs strategized on how to coordinate and facilitate district QI and mentorship activities, shared best practices and challenges, and discussed how to sustain QI and mentorship activities.

As a way forward, ZISSP recommends that the CCT be shifted to be a sub-committee under the QI committees at provincial and district levels. QI committees have the role of identifying mentorship gaps and assigning CCTs to address these gaps. At the national level, ZISSP recommends the creation of a national CCT under the national QI TWG. This body would provide policy direction to the MOH and MCDMCH, conduct future reviews of the clinical mentorship guidelines and training package, and provide continued technical support to the provincial and district-level CCTs. The national CCT can also provide mentorship in specialized fields to clinicians at provincial hospitals.

2.2 Management

How we found it: Although the MOH had steadily improved the performance of planning and financial management systems, a need for additional capacity building emerged in 2010 and 2011 as a result of the government's human resource restructuring. The MOH planning system was not standardized across national, provincial, district, health facility, and community levels. The MOH also placed emphasis on the use of data for decision-making when monitoring performance against the annual plans throughout the year. MOH identified a need to increase access to data and other types of health information to guide the annual planning process. With increased emphasis on data use, the health system required approaches to prevent, recognize and address data errors so that planning would be guided by complete and accurate data.

Problem solving projects are developed throughout ZMLA as an opportunity to apply the training concepts to solving real life problems in the healthcare system.

Major accomplishments: Working through the seconded Management Specialists, ZISSP supported a revision of the PA tools and ensured consistency in indicators used throughout the tools to strengthen the monitoring of district-level health centers and hospitals in line with the National Health Strategic Plan. The revised PA tools made it easier for the MOH to identify areas requiring further strengthening at the health facility level. ZISSP also provided financial and technical support to health training institutions to revise nursing standards in line with core functions to strengthen their PA activities.

ZISSP trained 294 MOH personnel (234 males, 60 females, both non-accountant managers and new accountants) in government-approved financial management procedures. ZISSP Management Specialists continued to provide technical mentoring and coaching at district level during routine performance monitoring activities, such as during PA exercises. The capacity building contributed to increased financial compliance and improvements in the appropriate allocation and use of available resources to improve service delivery. In conjunction with the multi-country Health Systems 20/20 project, ZISSP also provided technical support to the MOH to train 43 Planners and Information Officers (34 males, 10 females) on the Marginal Budgeting for Bottlenecks (MBB) toolkit. The combined total of trained in financial management and MBB was 337, which exceeded the life-of-project target of 240 people.

To ensure more transparent resource allocation to hospitals, ZISSP collaborated with the MOH and the University of Zambia – Department of Economics to develop a resource allocation formula for level 2 and 3 hospitals. The new tool ensures more equitable funds to level 2 and 3 hospitals.

ZISSP supported data analysis in the fifth round of the National Health Accounts (NHA) survey, and also strengthened technical capacities of the Zambian NHA team to conduct data analysis. As part of the fifth round exercise, ZISSP also developed and piloted a resource tracking tool that could be

used to collect district level health expenditure data on a routine basis. With refinements, this tool will supply the data for future NHA exercises. Data from both rounds of NHA will influence government decisions on future funding to the sector and to specific programs.

In 2014, ZISSP provided financial and technical support to MOH, MCDMCH and the University of Zambia - Department of Economics to conduct an in-depth training in the Systems for Health Accounting (SHA2) methodology, which is being used for the first time in Zambia. A total of 31 senior officers and research assistants (21 males, 10 females) were trained in this new methodology.

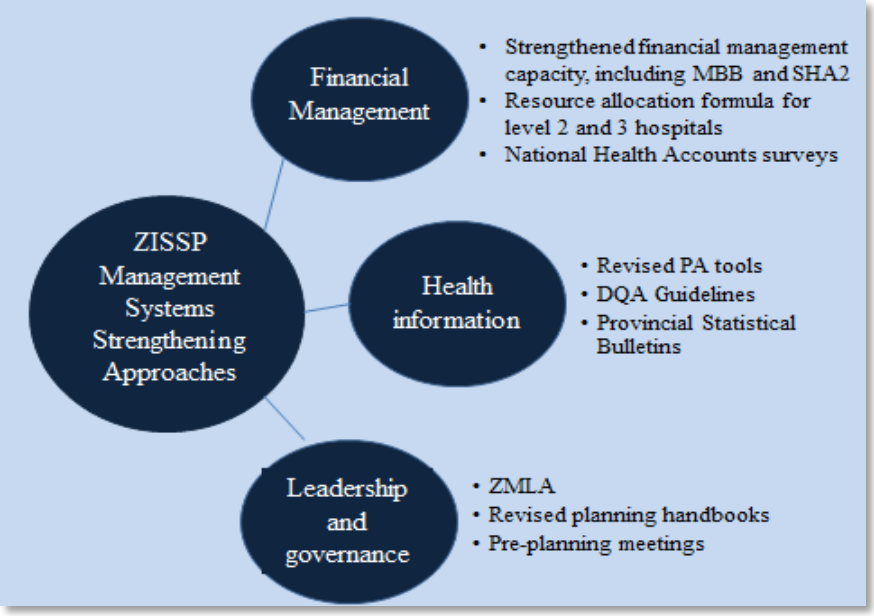
ZISSP worked with the MOH to revise the following planning handbooks to align them with the new MOH planning process: *Planning Handbook for MOH Headquarters and Provincial Health Offices, Action Planning Handbook for Statutory Boards, Action Planning Handbook for Hospitals, Action Planning Handbook for Training Institutions, and Planning Handbook for Health Centers, Health Posts and Communities*. As an additional resource for planning, ZISSP developed the *Step-by-Step Guide to Planning*, which provides a clear, simple process for developing annual action plans and is a key reference document for the Medium-Term Expenditure Framework (2014 – 2016) exercise. ZISSP also revised the *Simplified Guide to Community Planning* to help NHCs engage communities in the health planning process.

Following the development of standard MOH planning tools, ZISSP worked with MOH and MCDMCH to train 86 managers and officers (71 males, 15 females) throughout the health system as trainers in order to strengthen district-level capacities in health planning and management. This cadre of trainers oriented 168 government staff to the health planning process (128 males, 34 females). A total of 410 people were reached with planning capacity-building, which exceeded the target of 390.

With ZISSP financial support, the MOH and MCDMCH introduced pre-planning meetings at national, provincial and district levels to review performance in the previous year and to prioritize health programs to focus on in the following year. ZISSP also worked through the national M&E TWG and each PMO to develop and print *Provincial Statistical Bulletins* for nine provinces to fill gaps in information and increase access to data for planning and monitoring.

ZISSP supported the MOH M&E unit to establish a system and guidelines for the *Data Quality Audit*, which would improve the quality of data feeding into the HMIS. ZISSP built capacity of 482 provincial and district program officers (324 male, 158 female) from 27 districts across all 10 provinces in data management and usage, exceeding the life of project target of 320, including 109 trained in the use of the new *Data Quality Audit Guidelines*.

FIGURE 7: SYSTEMS STRENGTHENING APPROACHES FOR MANAGEMENT AND LEADERSHIP



A cornerstone of the ZISSP support for leadership and governance in health was the establishment of ZMLA. As of September 2014, ZMLA has enrolled 767 participants (545 males, 222 females) in three cohorts, who participated in 2,674 sessions, exceeding the session target of 1,642. Of these, 464 participants in Phase I and II cohorts met all the graduation requirements, falling short of the target of 540 persons. However, an additional 116 participants are currently undergoing coursework in Phase III as of December 2014. Graduates obtained a Higher Diploma in Management and Leadership from NIPA, which is the government-approved implementing and accrediting body for management courses. ZMLA participants are equipped with the knowledge and skills to lead, own and transform the delivery of healthcare in their own country, resulting in improved care and saved lives.

How we left it:[14] An updated planning process, supported by improved access to data, contributed to informed decision-making and improved identification of health priorities across the health system. In 2014, ZISSP conducted the *Health Planning Documentation Study* to capture the perception of government regarding ZISSP's support to the MOH and MCDMCH's planning processes at national and provincial levels, and in ZISSP target district and communities, between 2011 and 2014. The report documents key achievements, challenges, and lessons learned and provides recommendations to strengthen future health planning efforts by government officials and/or support from programs supporting the Government. Key findings include the following:

- Health planning tools developed, revised, and updated with ZISSP support are being utilized in the health planning processes and are perceived to have contributed to improved health planning processes overall.
- Revitalization of stakeholder collaboration and hosting regular meetings, supported by ZISSP, has enabled provinces to better-coordinate their planning processes and better-support the most under-served areas.
- Staff shortages and attrition have continued to contribute to weak planning processes at district level.
- Erratic or fewer resources going to districts have contributed to reduced staff motivation and reduced implementation of health plans, especially at health center and community level.

Study findings reveal a strong desire from the informants at all levels for continued partner support. The following areas were specifically identified: further assistance to strengthen the health planning-related management and leadership capacity of health managers and clinical personnel; assistance to strengthen knowledge on issues of inclusivity and gender empowerment; and continued partner collaboration with the government, in a transparent manner that allows for continuous sharing of information and feedback.

To guide future implementation of ZMLA, ZISSP conducted an evaluation of the training program in 2014. The ZMLA evaluation concluded that stakeholders from NIPA, the community, and policy makers at both MOH and MCDMCH reported a desire for the program to continue as an important component of health systems strengthening. This conclusion was also a finding in the *Health Planning Documentation Study*.

[14] For more information, refer to the ZISSP program brief entitled *Strengthening Management Systems for Delivery of High-Impact Health Services*.

2.3 Malaria

How we found it: By 2010, Zambia was making rapid progress toward the goal of eliminating malaria. New malaria cases had reduced from a high of 425/1,000 population in 2003 to 330/1,000 in 2010, and the malaria case fatality rate was falling.[15] However, Zambia reported insecticide resistance to three of the four insecticide classes recommended by the WHO for vector control. High levels of resistance were reported to DDT and pyrethroids, which were the main insecticides in use at that time for controlling malaria through IRS. At the same time, the IRS program was expanding to 54 districts in 2010 and 72 districts in 2011. The rapid scale-up of control measures, confirmation of insecticide resistance, and lack of resistance data in much of the country created a high potential for vector control failure. Although the Zambian government had clear policies and guidelines on malaria diagnosis, case management, and malaria in pregnancy, the government's National Malaria Strategic Plan 2011-2015 highlighted poor health worker compliance to the guidelines as a challenge.[16] In particular, the plan cited weak compliance to the policy requiring that malaria be confirmed with diagnostic tests prior to treatment. In addition, several barriers, including low first antenatal care attendance rates, impeded malaria control in pregnancy.

The Zambian government uses IRS as a vector control strategy in areas with high malaria burden. Here, spray operators undergo training in Eastern Province.

Major accomplishments:

IRS: With ZISSP contribution, the Zambian government increased IRS coverage, particularly in rural areas of Zambia. ZISSP partnered with the Zambian government to provide financial and technical support throughout the entire spraying cycle in 2010, 2011, 2012, and 2013. ZISSP support focused on IRS planning across all levels and IRS training in 54 districts in 2010 and 35 districts in 2011, while the government used World Bank funds to manage actual IRS implementation. ZISSP's focus changed in 2012 based on the Zambia National Malaria Indicator Survey 2012, which provided updated data on the distribution of malaria around the country. Based upon guidance from the MOH, ZISSP narrowed its IRS focus to 20 districts in Northern, Eastern, and Muchinga Provinces and widened support to include implementation. ZISSP support contributed to a total of 2,549,693 structures sprayed in the four spray seasons combined.

ZISSP used a cascade training model, supporting the NMCP to train 588 Environmental Health Technicians as IRS trainers (467 males, 121 females), who in turn trained 5,775 community spray operators (4,013 males, 1,762 females). The combined total of trainers and spray operators trained is 6,363, which is less than the life of project total of 7,201 because the numbers trained in 2014 were counted under the AIRS project. ZISSP also trained over 100 community volunteers from more than 20 districts to conduct geocoding and trained supervisors to monitor them. Geocoding provided information on the number and distribution of structures across a district to identify clusters and prioritize particular areas for IRS and insecticide-treated net (ITN) distribution.

Throughout the IRS cycle, ZISSP supported the NMCP with data for decision-making. ZISSP support enabled NMCP to conduct annual IRS needs assessments. The information formed the basis for annual quantification of IRS requirements by NMCP; determined district readiness for the next spray season; and identified changes that had occurred since the previous spray campaign. ZISSP also provided support for annual IRS data audits to ensure adherence to data quality.

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[15] United National Development Program. 2013. *Millennium Development Goals: Progress Report, Zambia. 2013*. Lusaka, Zambia, page 40.

[16] *National Malaria Control Programme Strategic Plan 2011-2015*, page 40.

Insecticide Resistance Management (IRM): The NMCC with support from ZISSP established the IRM TWG and enhanced efforts to monitor both insecticide resistance and the resistance mechanisms present in the country. In 2011, ZISSP carried out entomological insecticide resistance monitoring, mosquito bionomics studies and the distribution of vector mosquitos in 20 districts, which identified the main vector species in different parts of Zambia. Using entomological results from several sentinel sites across the President's Malaria Initiative (PMI) - and government-supported districts as well as data from stakeholders, the IRM TWG approved selection of insecticides to use in the ensuing spray season. ZISSP with its subcontractor LSTM worked with the NMCC and partners to compile entomological data and developed an IRM plan in accordance with the *Global Plan for Insecticide Resistance Management in Malaria Vectors*, which was published by WHO in May 2012. The three-year IRM plan aims to direct the malaria program into using effective insecticides for control, while moving away from mono-therapy.

ZISSP installed a pre-fabricated insectary at NMCC to support entomological studies.

ZISSP provided technical and logistical support to the NMCC to maintain a breeding mosquito colony for entomological monitoring. ZISSP also procured and installed a prefabricated insectary at NMCC to expand capacity for entomological studies. To improve the breadth and depth of data on vector mosquito population distribution across a wider area, ZISSP, together with Akros Inc., provided support for capacity building in basic entomological surveillance for 80 environmental health technicians (63 males, 17 females) from 29 districts.

Malaria case management: ZISSP trained 1,143 health workers (711 males, 432 females) from 79 districts in the 2010 revision of the *Malaria Case Management Guidelines* to improve treatment compliance. The project also trained 1,241 health workers (438 males, 803 females) in focused antenatal care (FANC) from 60 districts and provided clinical mentorship in FANC for 174 trained health workers. An additional 617 health workers (250 males, 367 females) received clinical mentoring in FANC as part of prevention of malaria and mother-to-child transmission (PMTCT) of HIV. The combined total of persons trained and mentored in FANC (2032) exceeded the life-of-project target of 1656. The mentorship covered correct use of intermittent preventive treatment of malaria in pregnancy (IPTp), which is a standard of care for pregnant women. At national level, ZISSP provided financial and technical support to MOH and then to MCDMCH twice during the project life to review the FANC training materials to update them based upon the latest technical updates from the WHO and country-specific information.

Malaria case management guidelines stipulate that suspected malaria is confirmed with diagnostic tests prior to treatment.

In addition to building health worker capacity, ZISSP also expanded malaria treatment services into communities. ZISSP provided technical and financial support to the MCDMCH to train 1,444 CHWs (1,078 males, 366 females) from 30 districts in integrated Community Case Management (iCCM). This training enables the CHWs to diagnose and treat uncomplicated illnesses in children under five years of age. Following training, CHWs were linked to professional health staff at the nearest rural health center (RHC) for supervision, supplies, and reporting. To build iCCM supervision skills, ZISSP trained 160 health providers (120 males, 40 females) from the nearest RHCs. CHWs refer severe cases to the RHC for advanced care, while RHCs may refer children to the CHWs for continued monitoring after an RHC visit. The combined total of CHWs and supervisors trained was 1,604, exceeding the life of project target of 1,512.

Active Case Surveillance: ZISSP, through subcontractor Akros Inc., created an Active Case Surveillance (ACS) program in Lusaka District. The ACS model provides a feedback loop to clinic staff, allowing them to review malaria trends at their clinic and improve the quality of their diagnostics and adherence to malaria case definitions. The enhanced surveillance program contributed to increased confidence in the use of laboratory confirmations among patients by clinicians and increased perception among facility staff that malaria is not a significant problem in the district. This has resulted in a reduction in the number of clinical malaria cases being reported based on clinical symptoms without laboratory confirmation. With support from ZISSP, the NMCC introduced a malaria rapid reporting system in Lusaka District, which uses the District Health Information System 2 (DHIS2) platform. The online system requires health facilities to report on 17 malaria-related indicators on a weekly basis, allowing for more regular and timely monitoring of malaria data at the health facility level.

ACS monitors the extent that clinicians use laboratory confirmed malaria diagnosis prior to treatment.

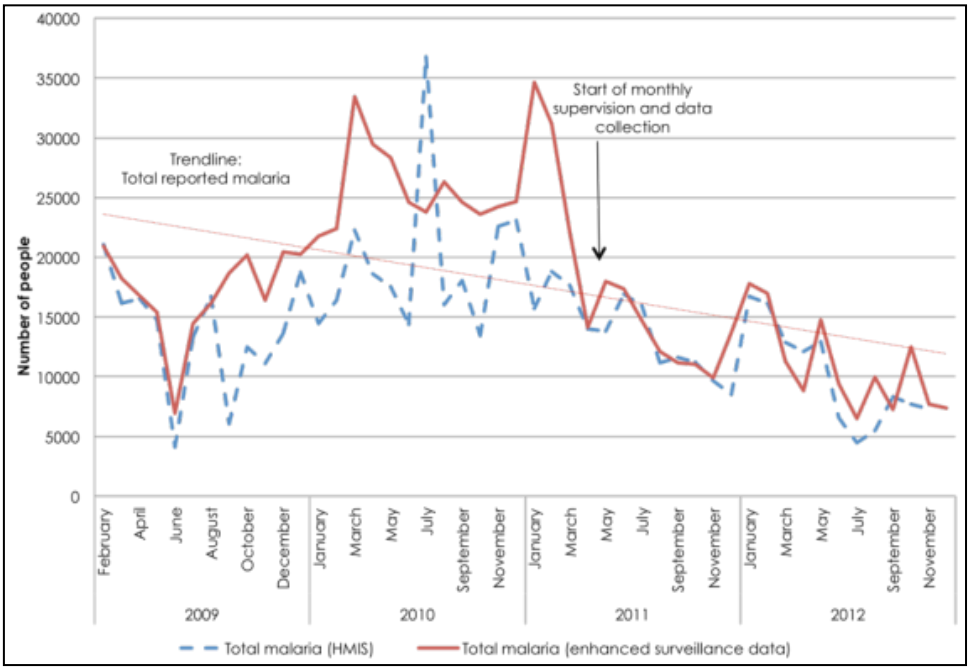
ZISSP also employed active infection detection (AID), where confirmed malaria cases are followed up on a weekly basis in the community with screening to identify additional malaria infections and to treat as necessary. Information collected through these follow-up visits provide evidence that much of the malaria which occurs in Lusaka is related to travel outside the city. This same data provided guidance on where to target interventions like IRS, which is important because of the low malaria burden in the district as a whole. As of 2014, the AID program was active at 23 of the 28 health facilities in Lusaka District and had expanded to Mumbwa District.

How we left it:[17] Continued emphasis on IRS, entomological studies, malaria case management and enhanced surveillance, in conjunction with other evidence-based interventions such as ITN distribution, is required to achieve the targets set for reducing malaria incidence and mortality under Millennium Development Goal #6. To foster sustained technical capacity for IRS implementation, ZISSP built capacity of district government staff to supervise the spray operators, rather than assuming this responsibility as a project. This approach strengthened health sector ownership of the IRS program and set the foundation for sustainability of supervision in future spray cycles after the end of ZISSP. ZISSP also trained master trainers so that the Zambian government has the capacity to continue to train new IRS trainers and supervisors as well as to monitor the quality of supervision. In May 2014, PMI approved the transfer of all IRS activities to the AIRS project because ZISSP's project end date would occur during the 2014 spray season.

[17] For more information, refer to the ZISSP program brief entitled *Comprehensive Malaria Interventions in Zambia.*

Prior to the start of enhanced surveillance system, HMIS and enhanced surveillance data were only moderately correlated compared to after where correlation increased significantly. The graph in Figure 9 includes data from before and after the implementation of monthly enhanced surveillance system visits in 2011.

FIGURE 8: COMPARISON OF TOTAL MALARIA CASES REPORTED THROUGH STANDARD HMIS VERSUS DATA COLLECTED THROUGH MONTHLY SUPERVISION AND REVIEW OF CLINIC REGISTERS DURING THE ENHANCED SURVEILLANCE SYSTEM.



A key to improving case management and surveillance is the data feedback loop made possible through monthly on-site ACS visits to clinics. The data-driven discussions instilled a sense of importance to data quality within members of the clinic team and highlighted the importance of following case management guidelines. Using the experience of and lessons learned from Lusaka and Mumbwa Districts, the government has the technical capacity to roll out the ACS program to other districts, while continuing implementation within existing districts, to promote adherence to malaria case management guidelines.

A key component to the success of the enhanced surveillance program has been the monthly supervision visits at clinics. As ZISSP has closed, these visits have been limited. MCDMCH and NMCC staff are stretched very thin, and although they are vested in the program and conducted supervision visits when funds were available, without continued support, the supervision has decreased. This has been reflected in the data trends suffering (increased clinical case reports for example) which speaks of the contribution of the enhanced surveillance program. Currently, ZISSP is seeking to identify a partner organization whose mandate may include the enhanced surveillance work and would have the resources to carry this forward with the NMCC. NMCC and MCDMCH staff are eager to see this enhanced surveillance continue. Further, Akros is working with the government to explore additional methods to implement enhanced surveillance in a cost-effective, sustainable manner.

Despite operational challenges (e.g. lack of transportation), Lusaka District have adopted the AID system, integrated ongoing costs into their district-level budgets and have, overall, shown very high levels of ownership of the system. The work conducted in Lusaka through ZISSP has gained stakeholder interest and led to funds and motivation to scale this approach up. Thus, a modified

system applied to rural areas targeting malaria elimination has now been developed termed "Step D" and falls within a sequence of "Steps" to achieve malaria elimination[18]. The AID program continues across Lusaka. Lusaka DCMO funds and manages AID in 10 clinics out of 23. Remaining clinics will continue to be funded through existing research funds (Malaria Eradication Scientific Alliance/MESA) which were awarded, in part, due to the existing operational AID structure provided through ZISSP.

AID-related work (termed "Step D") has halted within Mumbwa District (Central Province) due to ZISSP close-out. PATH-MACEPA has expanded the system to cover nearly all of Southern Province and Central Province. Isdell Flowers Cross Border Malaria Initiative has also come on board to scale to select areas of Western Province. Finally, MESA has now begun supporting research being conducted by a ZISSP subcontractor (Akros) and within the AID program to better understand malaria elimination dynamics.[19]

A trained spray operator prepares to spray a house during the annual IRS activities.

[18] http://akros.com/malaria-prevention/community-surveillance/
[19] http://akros.com/news/akros-wins-mesa-grant/

Task 2: ZISSP Integration Highlight

Clinical Mentoring Improves Malaria Case Management in Kapiri Mposhi District
Health Workers Increase Confidence in Rapid Diagnostic Test Results

There's a persistent myth across Zambia that all fevers are caused by malaria. In fact, the prevalence of malaria is decreasing due to interventions such as IRS and ITNs, and fever could be a sign of varying types of illness. This belief is not only insidious in the community but is also held by frontline health workers, who often prescribe anti-malarial medications without laboratory confirmation of a positive malaria diagnosis. Even with the availability of rapid diagnostic tests (RDTs) for malaria, health workers were not using them as they believed that RDTs gave false results if shown negative in someone presenting with fever.

Improper malaria case management practices, leading to the over-prescription of costly anti-malarial medication, were identified as a problem in Kapiri Mposhi District in Central Province. The DCMO used the District CCT to mentor frontline health workers at selected health centers in history-taking, examination, diagnosis and treatment of malaria based on the national guidelines. The district CCT, which was established in 2012 with technical and financial support from ZISSP, is a multi-disciplinary team of health professionals that are available for timely mentorship across the district to address identified performance gaps.

Thanks to the clinical mentorship program in the district, the diagnosis, treatment and reporting of confirmed malaria cases have improved greatly at Kapiri Mposhi Urban Health Center. Frontline health workers now accept the RDT results, whether negative or positive. This new confidence in the RDTs helps to diagnose or rule out malaria. When they rule out malaria as the cause of fever, they are now able to probe further and come up with an appropriate diagnosis. This change in practice has led to increased proportions of confirmed malaria cases at the health center from 65% in 2012 to 82% in 2013.

Dr. Charles Mwinuna, the Kapiri Mposhi DCMO, clearly sees the results of the mentorship program from a quality of care perspective, saying, "We have observed a decline in the clinical malaria cases, [seen] an increase in requests for malaria RDTs, and reduced anti-malaria consumption in the district." He further explains that "no patient with negative RDT results is put on anti-malarial treatment." To support sustained improvement, the district CCT will continue to provide periodic supervisory visits for ongoing mentorship.

Mr. Passwell Simuunza, the Kapiri Mposhi DCMO Clinical Care Officer, mentors a health worker at the Urban Clinic in malaria case management.

"We have observed a decline in the clinical malaria cases, [seen] an increase in requests for malaria RDTs, and reduced anti-malaria consumption in the district."

-Dr. Charles Mwinuna,
Kapiri Mposhi DCMO

Task 3: Improve community involvement in the provision and utilization of health services in targeted areas.

How we found it: Active involvement of communities in the health system is a key focus of Zambia's primary health care strategy. Under the MCDMCH, NHCs are responsible for health promotion at the community level and are the link between health centers and communities. Other existing community health structures coordinate with NHCs, and often address specific health issues; these community health structures include, for example, SMAGs and other groups, or local non-governmental organizations. However, the ZISSP inception report and 2011 mapping exercise found that NHCs were not functional in most communities. Community health priorities were frequently not incorporated into health center action plans and only 30% of community plans received government funding. Coordination between health centers and community structures was weak in most districts.

Sara Ngandwe (at right) counsels a pregnant woman from her community about safe motherhood.

SMAG members educate and counsel pregnant women and community members about reproductive health and safe motherhood practices. The SMAG program was established in Zambia in 2003 as part of a national safe motherhood program. By 2010, SMAGs had been established in 45 of Zambia's 72 districts[20] with provincial level coverage ranging from less than 20% of districts in Copperbelt Province to all districts in Luapula, Northern, and North-Western Provinces. However, because of a lack of a central coordination for the SMAGs, communities often did not know how to use these groups after they were established and many SMAGs have remained inactive. The MOH and MCDMCH were supported by several other development partners, such as the United Nations Population Fund, to establish and train SMAGs throughout Zambia. These partners used different training curricula, some of which were primarily didactic (i.e. focused on teaching the technical subject matter) without a prominent participatory skills-building component.

Major accomplishments:

Safe Motherhood: ZISSP updated government SMAG training materials by integrating the Community-Based Maternal and Newborn Life-Saving Skills (CBMNLSS) curriculum and training methodology. These training materials use pictures and community dialogue and participation to foster agreement on new behaviors. The picture cards are appropriate for low-literate communities and facilitate the training of SMAGs and engagement of community members.

ZISSP trained 160 master trainers and district trainers and built their skills to provide post-training, on-site mentorship to SMAGs. Using these trainers, 3,906 volunteers (1,749 males, 2,157 females) received training as SMAG members from more than 85 health facilities in 17 districts, exceeding the life of project target of 3,000. ZISSP also developed a radio distance learning program and job aids to supplement SMAG training. Twenty-six safe motherhood topics were aired on five community radio stations, reaching 240 SMAG members (110 males, 130 females) in six districts (included in the total above).

SMAG members use registers which follow mothers throughout pregnancy and their newborns through the first six weeks after birth. This data adds to the available information used by the health facility and DCMO to analyze safe motherhood results and make program decisions.

[20] Until 2013, Zambia was subdivided into 72 districts. In 2013, 17 new districts were created.

The strengthened involvement of communities in health contributed to increased uptake of high-impact health services (malaria, family planning, maternal and child health, nutrition, and HIV). An impact evaluation of the SMAG program in 2014 found a positive association between the SMAG program and increased institutional deliveries. Deliveries were about 17.8 per facility per month without the SMAG program to around 20 with the SMAG program[21], representing an increase of about 12%.[22]

ZISSP also coordinated safe motherhood activities in Lundazi, Nyimba, Kalomo and Mansa Districts through the SMGL endeavor. The endeavor is a joint collaboration of the United States Global Health Initiative, Merck for Mothers, Every Mother Counts, the American College of Obstetricians and Gynecologists, and the Norwegian Government Global Health Initiative to End Preventable Maternal and Newborn Deaths. As mentioned above, ZISSP seconded SMGL coordinators to each of the four pilot districts and at the Eastern PMO. The seconded SMGL coordinators played a key role in facilitating partner coordination on SMGL activities in their respective districts. In the context of the SMGL endeavor, ZISSP assisted by supporting district- and community-level Maternal Death Surveillance and Response committee meetings with enhanced community participation and collaboration, which resulted in improved reporting of maternal deaths and the execution of measures to avert future maternal and neonatal deaths. ZISSP also supported training SMAG members and engaging traditional leaders in safe motherhood activities to create service demand. With ZISSP support, an additional 100 health workers in the SMGL districts were trained in EmONC (52 males, 48 females) to strengthen the quality of maternity services at health facilities in the four districts. SMGL district reports indicate an increased adoption of positive health-seeking behaviors and increased male involvement. In addition, maternal mortality reduced by 35% and institutional deliveries increased from 63% to 84%.[23]

Community health planning: ZISSP revised the existing *Simplified Guide to Community Planning*, which includes a manual for facilitators to train NHCs and a participant's manual for community members. ZISSP oriented 1,865 NHC and HCAC members (1,283 male, 582 female) on the guide. The training enabled them to engage communities around 78 health centers in the health planning process. Community members prioritized health-related needs and developed plans to address them. The process helped health centers engage communities in health planning and include the community plans in the health center plans. As a result, several NHCs have accessed funding for their health priorities, including funding from the government health budget as well as from ZISSP grant funding. After the implementation using the *Simplified Guide to Community Planning*, the government's 10% funding allocation was provided to 50% of the community

Involving the community in health decision-making strengthens partnerships between the government health system and the community and influences uptake of health services at health centers.

[21] Data compares changes at facilities after the SMAGs training was conducted in their catchment area to changes in a comparison group of facilities without SMAGs during the same time period. The comparison group was selected using a propensity score matching process that aimed to replicate the selection process of the facilities covered by the ZISSP-supported SMAG program.

[22] Johns, Ben, Nikita Ramchandani, Alison Comfort, and Slavea Chankova. October 2014. *Impact of Safe Motherhood Action Groups on Use of Maternal Health Care in Zambia.* Bethesda, MD: Zambia Integrated Systems Strengthening Project, Abt Associates Inc.

[23] *SMGL At-A-Glance Results*. Downloaded from http://www.savingmothersgivinglife.org/our_work/infographic_uganda_zambia.aspx

plans that were included in the health facility plans. This support enabled communities to address gaps in the provision of health services, particularly in areas that have limited access to health centers. Examples of community activities included construction of mother's waiting shelters to support safe motherhood and construction of latrines and promotion of hand-washing to promote improved hygiene. Involving communities in the planning process also promoted community ownership of health issues and motivated communities to mobilize locally available resources for health activities.

BCC: ZISSP subcontractor JHU−CCP supported the MOH to develop the *Community Behavior Change Communication Framework*. The framework enables the district and its partners to develop and implement community-level BCC activities, which focus on the desired health behaviors and the messages defined by national strategies. ZISSP supported the MOH to train 3,472 people (2,295 males, 1,177 females) to apply the BCC framework, including Provincial Health Education Officers, District Health Promotion Focal Persons, and individuals and organizations involved in community-based health promotion. The framework includes tools, which help districts to establish and guide Social Behavior Change Communication (SBCC) Coordinating Committees. Forty districts created these committees with ZISSP support. These committees take responsibility for strengthening BCC coordination and implementation across the district and within communities.

Members of Mtilizi Drama Group use entertainment to promote positive health behaviors.

ZISSP strengthened the capacity of community drama groups to communicate appropriate health promotion messages in an effective manner to increase demand for and utilization of health services by men and women. ZISSP, through subcontractor JHU−CCP, created training materials for community theater groups to develop their skills in script-writing around desired health behaviors, improve their drama performances, and build their capacity to facilitate community discussions. The district health promotion staff conducted monitoring and mentoring of the drama groups and the health centers every month. ZISSP trained 45 master trainers (21 males, 24 females) in community theatre for health promotion, who subsequently built the capacity of 220 members of 22 drama groups attached to 18 health centers. At district level, ZISSP distributed participant's reference guides and facilitator's manuals to DCMOs to be used for refresher training for the drama groups. The DCMOs also received a training video on community theater, which captures the process of training community drama practitioners and documents the entire process of a community drama session.

ZISSP worked with MOH and MCDMCH to develop the *Integrated Health Toolkit for Zambian Traditional Leaders*, which included messages on all high-impact health areas (malaria, family planning, maternal and child health, nutrition, and HIV). Using a team of trainers from the Provincial and District Health Promotion Officers, ZISSP oriented 650 headmen (565 males, 85 females) and 13 senior chiefs in the toolkit. As a result of orientation, the leaders had action plans to collaborate with health facilities and community based volunteers (e.g., SMAGs, NHCs, etc.) to motivate community members to adopt positive healthy life styles.

Grants: ZISSP provided small grants to 18 community organizations across 12 districts to implement BCC activities aimed at improving healthy behaviors at the community level (see text box). Before they were selected for funding, grantees went through a series of appraisal and approval processes by the Grant Support Teams. There were 144 organizations that expressed interest, out of which 11 were selected for the first cycle of funding; seven were selected for the second cycle of funding. Six of the initial 11 organizations received cost extension grants. The selected grantees went through a number of capacity building programs including an orientation to ZISSP focus areas and trainings in grants management, BCC, and organizational capacity building. ZISSP obligated a total of ZMK10,352,069.47 to the grantees, out of which K9,736,060.71 (94.1%) was disbursed during the two granting cycles.

Grant recipients conducted a variety of activities in their communities, including:

- Training NHC members in the community health planning process
- Training community volunteers in RDTs for malaria,
- Establishing and training SMAG groups,
- Expanding youth-friendly health services for adolescents,
- Widening community-based support for adherence to HIV treatment,
- Increasing utilization of ITNs to prevent malaria,
- Promoting hygiene practices of hand-washing, use of latrines, and other behaviors,
- Expanding access to FP commodities through CBD systems, and
- Mobilizing men to support the health of their families.

ZISSP Grantees (1st and 2nd cycle)

1. Childfund Zambia
2. Center for Infectious Disease Research in Zambia
3. Kalomo Mumuni Center
4. Thandizani Community Based HIV/AIDS Care and Support
5. Community Integrated Health Education Program
6. Groups Focused Consultations
7. Keepers Zambia Foundation
8. Diocese of Mpika Home Based Care Program
9. Serenje Pastors Fellowship.
10. Network of Zambian People Living with HIV/AIDS, Mwinilunga District Chapter
11. Global Esthetes Mine
12. Rising Fountains Development Program
13. Development Organization for People Empowerment
14. Luangwa Child Development Program
15. Community Health Restoration Program
16. Network of Zambian People Living with HIV/AIDS, Kalomo District Chapter
17. Adolescent Reproductive Health Advocates
18. World Vision Sinazongwe Area Development Program

How we left it:[24] Involving communities in bottom-up planning contributed to strengthened community-health center partnerships and improved chances for sustained community health actions. ZISSP's work to strengthen community planning was complemented by wider ZISSP support to strengthen the government's health planning processes at the district and provincial levels, such as revising planning manuals and hosting pre-planning meetings for districts. ZISSP's work to strengthen safe motherhood at the community level was complemented by capacity-building for health workers in LAFP and EmONC. However, ZISSP only focused community activities in 27 districts and there is need to scale up these efforts to other districts.

Participatory planning empowers communities to overcome gender, age, and literacy barriers to express their perceptions of health issues that affect them.

[24] For more information, refer to the program brief entitled *Engaging Communities in Health Planning and Promotion.*

Task 3: ZISSP Integration Highlight

Safe motherhood is everyone's responsibility: The engagement of traditional leaders in Zambia
Submitted by: Thandizani (a grantee of ZISSP)

Community leaders from the area surrounding Lukwizizi Community Rural Health Center in Lundazi District have set an example of how a strong working relationship between traditional leaders and community health programs can promote positive change in health behaviors.

Mr. Chiyendeyende Adams Zimba, a headman of Chief Mphamba's area, explains that men were not concerned with safe motherhood in the past. He says, "Previously we used to look at women as responsible on all issues pertaining to women – child-bearing in particular. According to our custom and culture, men were rarely involved in preparations for the pregnant mothers and their babies. Mainly, the preparations were left to women, and all the care for new babies were left to them." Traditional medicines were used to treat pregnancy-related complications, and the medicines sometimes led to stillbirth or maternal death. He went on to explain that, "Whenever things went wrong, the blame was always put on women."

Headman Chiyendeyende changed his perception of men's roles in preventing maternal death in 2013, when he was trained as an advocate for safe motherhood. He explains, "Today the picture has changed drastically, where it is now everyone's responsibility to make sure that no woman should die when and after giving birth. I saw the need of male involvement not only as community leaders, but also as a father. As custodians of culture and tradition, our main role as community leaders is to talk about negative cultural and traditional beliefs and practices that may affect the [health] program. "

ZISSP engaged traditional leaders as change agents for health behavior in 27 target districts, with a focus on HIV and AIDS, malaria, family planning, maternal health, newborn and child health and nutrition services. Headman Chiyendeyende explained that, "As group headmen we have a role to play. As community leaders, we help in mobilizing the community and go round with Safe Motherhood Action Group (SMAG) members in different villages to give health education on the dangers associated with pregnancy and their newborn babies. I am very impressed because all the SMAG members in my area have a register for all pregnant mothers; this makes it easy for them to monitor and provide support whenever required."

Community leaders in in Chief Kapichila's area discussing the importance of male involvement in safe motherhood activities.

"It is now everyone's responsibility to make sure that no woman should die when and after giving birth."

– Mr. Chiyendeyende Adams Zimba, a headman of Chief Mphamba's area.

Task 4: Ensure service delivery and other activities are effectively integrated at all appropriate levels in the health system through joint planning and in-kind activities with partners and appropriate public private partnerships.

How we found it: When ZISSP commenced in 2010, it was tasked to support several TWGs. TWGs are formed by the MOH and MCDMCH to provide a forum to coordinate various health programs; develop and/or review health policies, guidelines and training curricula; share information; develop annual plans; and foster collaboration amongst various stakeholders in the health sector in Zambia. An inception report showed that the specific TWGs ranged from very active to inactive. A number of challenges were observed in the operation and coordination of the different TWGs. Some TWGs had weak management, contributing to poor coordination and communication to members. Other TWGs experienced low participation in terms of attendance, mainly because of the irregular or poorly communicated meeting schedules or due to over-commitments by stakeholders to multiple TWGs. Emerging health issues were not adequately addressed by the existing TWGs if the issue was not clearly included in a specific group's terms of reference.

Major accomplishments: ZISSP strengthened the functionality and coordination of 12 TWGs from June 2010 to September 2014. ZISSP's short-term support to the TWGs aimed to strengthen, rather than replace, the MOH and MCDMCH capacity to maintain active, functional TWGs. In addition to the TWGs listed in the text box, ZISSP also provided financial and technical support (both in planning and participation) for the quarterly Child Health Interagency Coordinating Committee meeting. This high-level committee brought together the MOH and MCDMCH and donors and their implementing partners to discuss high-level issues including resource mobilization for child health program implementation.

ZISSP-Supported TWGs:

1. Adolescent Reproductive Health
2. Child Health
3. Nutrition
4. Emergency Obstetric and Newborn Care
5. Family Planning
6. Human Resources for Health
7. Indoor Residual Spraying
8. Malaria Case Management
9. Insecticide Resistance Management
10. Monitoring and Evaluation
11. National Health Promotion
12. Quality Improvement

By bringing together various stakeholders regularly through the TWGs, the MOH and MCDMCH were able to compile and finalize policies, technical guidelines, training materials, and information, and then use the TWG members to cascade trainings and information to lower levels of the health system. The TWGs supported by ZISSP produced important outputs and outcomes, such as the following:

- **Improved data for decision-making:** The M&E TWG's Provincial Statistical Bulletins and Data Quality Audit Guidelines.
- **Improved guidelines and standards:** Guidelines for the Diagnosis and Treatment of Malaria and the National Standards and Guidelines for Adolescent Friendly Health Services.
- **New strategies:** Community Health Worker Strategic Plan under the HRH TWG.
- **Harmonized approaches:** *National Training Operational Plan 2013 – 2016*, developed under the HRH TWG, and standardized QI tools to facilitate uniform implementation and reporting of QI programs.
- **Updated training materials:** Focused antenatal care and family planning training materials.
- **Improved approaches for engaging communities in health:** BCC materials to train SMAGs, a strategic plan for building capacity among community theater groups, and an orientation package for staff at community radio stations to strengthen their ability to educate listeners about malaria.
- **Revised policies:** The revised policy on Child Health Week.

TWGs were a conduit to influence joint planning and in-kind activities with partners across different levels of the health system. As an example, ZISSP contributed to extending the reach of the National Health Promotion TWG to the district level. This complemented the support provided to the national-level TWG by the USAID-funded Communication Support for Health project. At the start of ZISSP, the National Health Promotion TWG only reached as far as the provincial level and Provincial Health Promotion Officers attended the national TWG meetings. The development and roll-out of the *Community Behavior Change Communication Framework* by the MOH with ZISSP support helped districts to establish and guide SBCC Coordinating Committees. Forty districts created these committees with ZISSP support. These committees take responsibility for strengthening BCC coordination and implementation across the district and within communities.

How we left it:[25] ZISSP was able to smoothly hand back TWG responsibility to the MOH, MCDMCH, and NMCC after providing short-term support. This handover was facilitated by the personal interest of the Ministry staff members in the TWG and the motivation of the Ministry staff to assume the role of the secretariat. The biggest risk to sustainability of the TWGs is the limited involvement of the various technical directors in the ministries to enhance accountability of these TWGs. As an essential part of expediting the process, the Ministry should take the lead in chairing meetings, ensuring consistent attendance at the TWG meetings by Ministry staff, and placing a strong, consistent and active secretarial team who can ensure timely documentation and circulation of minutes and follow up on decisions and issues discussed in meetings.

[25] For more information, refer to the program brief entitled ZISSP Support to the Technical Working Groups in the Zambian Health Sector.

4. LESSONS LEARNED

Based on ZISSP's implementation, the following is a summary of cross-cutting lessons learned[26]:

- **Secondment:** Staff secondment and integration at all levels facilitated effective program implementation and enhanced the ability of the MOH and MCDMCH staff to coordinate, scale up, and oversee health programs nationwide. In retrospect, it would have been useful to have a monitoring system that could track and measure the transfer of capacity from the seconded staff to the government.
- **Service delivery outcomes:** Training health workers without follow up mentorship and logistical support does not improve service delivery. Follow-up technical support supervision to trained health workers in different MNCH areas cemented knowledge and improved confidence to practice new skills. A key component to the success of the enhanced surveillance program for malaria was the monthly supervision visits at clinics. Providing on-site capacity building to community grantees helped the organizations to further develop and apply grant management skills. Grantees repeatedly expressed that they had a better understanding of what was required of them after the capacity building visits in comparison to the classroom training.

  Service delivery indicators can also be improved by applying QI principles, an approach which does not require extra resources. QI program implementation confirmed that health worker performance is dependent on organizational support via strong top-down support and leadership; skills and knowledge via mentorship; and ongoing performance feedback via monitoring by QI committees and higher-ups. The higher-level organizational support and leadership enabled health workers to establish the teamwork necessary for institutionalizing QI in health service delivery.
- **Sustainability and value of TWGs:** Strengthening the TWGs can expedite the Ministries ability to update guidelines, develop training materials, and obtain policy consensus in multiple health areas. After changes to the QI program were adopted by MOH, the TWG helped with institutionalization at lower levels. The TWG facilitated capacity building of the provincial QI committees, which cascaded capacity to lower-level committees. The TWG consistently monitored implementation, enabling continuity regardless of MOH staff turnover. ZISSP was able to smoothly hand back responsibility to the MOH and MCDMCH, respectively, after providing short-term support to the various TWGs. This handover was facilitated by the personal interest of the Ministry staff members in the TWG and the motivation of the Ministry staff to assume the role of the secretariat. The biggest risk to sustainability of the TWGs is the limited involvement of the various technical directors in the ministries to enhance accountability of these TWGs.
- **Integration of different health systems strengthening approaches:** Looking at the existing processes and systems in the health sector from a big picture perspective can identify opportunities to integrate new strategies with existing tools and approaches. For example, the QI committees and CCTs used findings from the existing PA process, provincial review meetings, and other clinical symposia to identify opportunities for QI project implementation and mentoring needs. The annual health planning process was also an opportunity to review sector-wide performance and make plans to address clinical gaps through mentorship in the coming year. Linking SBCC Coordinating Committees to a more formal government structure, such as the District Development Coordinating Committee (a structure used for information-sharing, planning and decision-making at district level), can enhance the committee's accountability on their BCC responsibilities. Working through the MOH for the entire grant

26 Refer to the ZISSP program and technical briefs for specific lessons by focus area.

selection and award process proved to be an innovative system and served as an effective alternative to an independent selection processes.

Key Challenges: The realignment of government offices between two ministries (MOH and MCDMCH), which occurred in the middle of the implementation of the ZISSP project, injected uncertainty into planning activities at the national level and slowed progress in some systems strengthening activities. Some ZISSP seconded staff changed Ministries mid-way through implementation as a result, and some TWGs also shifted from the leadership of the MOH to the MCDMCH. For ZISSP programming, the realignment meant that project investment in strengthening health systems in the MOH now only reached part of the health sector, as the MCDMCH did not have similar systems in place. A prime example is the support by ZISSP for the HRIS system designed for and implemented by the MOH. The realignment resulted in 23,000 positions shifting to MCDMCH, which did not have an HRIS. The re-alignment of the MOH and the MCDMCH has created some challenges in relation to coordinating, monitoring and evaluating health planning due to unclear roles for the PMO, affecting lower level implementing structures. Fortunately, day-to-day activities at district-level remained largely unchanged. ZISSP was able to identify funds and shift some activities to support systems strengthening in the MCDMCH, while continuing support for the MOH.

During ZISSP implementation, the following additional challenges were commonly faced:

1. **Stock outs of commodities at health facility level were a challenge across almost every area of implementation.** The challenge of stock-outs was frequently a result of inadequate commodity logistic management at facility level, although at times was also experienced on a national scale. Immunization coverage was challenged with erratic supplies of vaccines. Vitamin A supplements were available in health facilities during the Child Health week activities but were frequently unavailable throughout the year. Some trained LAFP providers could not provide services because they lacked supplies, particularly Jadelle. Contraceptive shortages also limited supplies for distribution by CBDs. Stock outs of anti-malarial medication and RDTs hindered implementation of ACS and iCCM.
2. **At times, delays by the Zambian government stalled progress on implementation of ZISSP-supported activities.** At national level, TWG members noted that policy decisions continue to take a long time to be finalized by the MOH and MCDMCH because of divergent views and interests by various stakeholders. The speed with which the Ministries make final decisions is further limited in cases where the MOH and MCDMCH representatives do not consistently attend TWG meetings (because they carry more influence as custodians of government policy). While the TWG plays a valuable role in monitoring sector performance and advocating for policy issues, their role is limited in terms of the groups' ability to hasten internal processes in the Ministries to act on recommendations. At district level, DCMOs often received monthly grants late from PMOs, which delayed the release of funds by districts to health centers and subsequently to communities. Certain annual events (e.g. Child Health Week) or processes (health planning) take precedence over other activities, causing delays in implementation of other activities until the prioritized activity is completed. Across all levels, some delays related to high dependency on participation of specific persons in implementation, e.g. a government focal person. This resulted in postponement of planned activities if the government focal person is engaged in other government-led or other partner activities. ZISSP also experienced a delay in insectary installation. While the design for insectary expansion was provided in 2012, the delay in approval by MOH meant that construction was only started in 2014.
3. **The transfer of human resources in the government health sector disrupted capacity-building plans and outcomes.** The continued movement of staff not only to MCDMCH from MOH, but also to and from other government departments outside health, means that past efforts to fill a skills gap or to address a complex systems challenge in a particular central department, PMO, DCMO, or health facility is erased if the new person filling that position does not have the key skill or knowledge or interest in the systems strengthening initiative. For example, ZISSP implementation was impacted by the constant transfers of staff in

senior positions from the MOH DHRA, which led to loss of institutional memory and loss of momentum for implementation of key programs. The central-level transfers meant that ZISSP had to play a constant role in orientation of new staff to the interventions that ZISSP had initiated their predecessor. Likewise, staff attrition has affected continuity of efforts to embed QI and clinical mentorship programs at all levels. At district and health facility level in particular, transfers (as well as under-staffing) impeded efforts to form QI committees and implement and monitor QI activities. When ZISSP invested in training providers from specific health facilities, the transfer of those providers out of those health facilities impeded service delivery, such as in the case of LAFP services, or interrupted supervision of community health volunteers, such as supervision of CBDs by health center staff. Inclusion of community plans in the health center was challenged by staff turnover if new staff did not understand their roles and responsibilities in supporting communities with health planning.

5. FUTURE DIRECTIONS

At the close of ZISSP, the MOH is responsible for implementation at national, provincial, hospital and training institutions, while the MCDMCH is responsible for implementation at district, health facility and community levels. Applying lessons learned from health systems strengthening within the MOH can expedite institutionalization of health systems strengthening interventions in the MCDMCH. This will require increased financial investment in the MCDMCH for the adaptation and implementation of these interventions. The portfolio shift also requires an updated analysis of the areas of financial investment needed by the MOH to sustain and scale up existing systems across the Ministry's portfolio. Looking ahead to 2015 and beyond, these investments will be guided by the anticipated performance review of the 2011-2015 National Health Strategic Plan and preparation of the new national strategic plan for the next five years.

Based on ZISSP's implementation, the following factors could be considered in the future:

1. **Explore alternate approaches for capacity-building of health workers.** The current in-service training models used by the government are heavily dependent on off-site, multi-day trainings. These are expensive to implement and interrupt service delivery, particularly at health centers. The cost is exacerbated by the increases in Daily Subsistence Allowance, which more than doubled training costs for ZISSP. Post-training technical support supervision visits to the trained providers are essential for reinforcing practice of new skills, but also adds cost to the overall training model and is not often included in the planning or budget for the training.

   In cases where trained providers do not receive the necessary mentorship, or when trained providers are transferred or pulled away from their posts for multiple trainings, the intended services may not be delivered at the health facility and this undermines the investment that was made in training. There are opportunities to re-look at pre-service training content, which could reduce the need for in-service training in the future. A promising step is the government's decision to review and update the Direct Entry Midwifery Curriculum from a two-and-a-half-year certificate program to a three-year diploma program. Additional recommendations include:

   - Expansion of multi-disciplinary CCTs into all districts to ensure that clinical mentorship is available to all health workers. The government can also reduce costly five-day QI trainings by spending more time at health facilities (minimum of 2-3 days) using mentorship approaches to work with health facility QI committees in their own environment. District CCTs could also be strengthened by the additional of Child Health, Adolescent Health, and EmONC coordinators or focal persons in all DCMOs who are also trained as mentors.
   - Expansion of innovative capacity-building approaches into pre-service training, such as the midwifery simulation labs and the ICATT software for nurses.
   - Incorporation of additional topics into pre-service training for health workers, such as LAFP, EmONC, and QI.
   - Inclusion of ZMLA in clinical training courses in the future. For clinicians with known ambitions of managing health institutions, ZMLA should be offered as an optional in-service training course at eligible training institutions across the country.

2. **Strengthen the MOH and MCDMCH role in leading TWGs and following through on recommendations.** There is need to speed up policy decisions so that stakeholders can act upon and/or implement their activities in line with the new policy without lengthy delay. As an essential part of expediting the process, the Ministry should take the lead in chairing meetings, ensuring consistent attendance at the TWG meetings by Ministry staff, and placing a strong, consistent and active secretarial team who can ensure timely documentation and circulation of minutes and follow up on decisions and issues discussed in meetings. A standard template could

be developed with specific action points, responsible individuals, and specific timelines. In addition, TWG recommendations can be shared across all levels of the health system.

3. Continue to strengthen district-level planning and management systems. Specifically, ZISSP recommends that MCDMCH:
    - Strengthen knowledge and skills in planning in districts, health facilities and communities, and review the *Planning Handbook for Health Centers, Health Posts and Communities* to incorporate issues pertaining to social welfare.
    - Build systems and processes for expenditure tracking at district level and ensure that systems can track community expenditure, particularly as the MCDMCH increases allocation and utilization of funds for community level interventions.
    - Invest in strengthened data management processes to improve data quality and usage in decision-making processes.
    - As part of the annual planning process, incorporate QI as a line item under other programs (e.g., malaria, HIV, etc.) rather than a stand-alone activity with a separate budget.
    - Plan for expanded community-level MNCH interventions, including recruitment and training of additional community volunteers to cover large catchment areas and expanding the use of Community Child Health Registers. In addition, CHW activities should be planned and costed by districts.
    - Roll out the PMP/APAS to more districts and health facilities.

4. **Strengthen specific aspects of M&E:**
    - Introduce a Community Health Information System (CHIS): The CHIS would collect data at community level to enable the government to monitor the contribution of community volunteers to child health and nutrition interventions and to identify service coverage gaps. As part of CHIS development, communities require simplified data capturing tools and reporting forms. The system should include clear channels of reporting with a feedback mechanism.
    - Develop standardized methods for measuring the five QI core indicators. Also, each health program should identify one or more health service delivery indicators that require QI approaches to track. Having a focus for the national QI indicators made it easier to start the QI projects in most places. However, based on the Clinical Care Specialist's experience with the model health facilities, tracking the QI core indicators was a challenge. Once these measurements are standardized and rolled out to provinces, districts, and health facilities, ownership of QI and data use may be improved, shared, and aggregated across all levels. Roll-out should use a formal system to train facility providers in using and analyzing HMIS data to monitor and assess their performance based on the core QI indicators.
    - Include FP and ADH indicators in the Performance Assessment Tools.
    - Collect specific and disaggregated data on ADH in the HMIS.
    - Expand use of the DHIS2 (a mobile application on a tablet), which was piloted in Lusaka as part of the malaria active infection detection program. This application gives an automated feedback loop to clinics (the Malaria Rapid Reporting System) and enables clinics to view their data on a monthly basis and compare their performance to others within the district. Government personnel are interested in becoming fully functional in DHIS2, as well as seeing all HMIS records shared through the DHIS2.

Additional recommendations can be found in the ZISSP program and technical briefs, which are available in each implementation area.

ANNEX A: 2014 HIGHLIGHTS

Task 1.1 HRH:

- Supported MOH training of 45 health staff (13 males, 32 females) on the PMP and APAS.
- Conducted a *ZHWRS* audit.
- Developed the *ZHWRS Sustainability Strategy* for the MOH.
- Reimbursed the MCDMCH and MOH for the allowances paid to 119 health workers on the ZHWRS for the period between January to October 2013.
- Supported the HRIS rollout in MOH to nine provinces,
- Designed a HRIS for MCDMCH; oriented 38 HR and IT staff (19 males, 19 females) from the MCDMCH at national and district levels; and piloted the HRIS in five MCDMCH sites.
- Trained 31 government employees (18 males, 13 females) in Record Management.
- Supported one DHRA quarterly performance review meeting attended by 38 HR staff (23 males, 15 females).
- Supported two Human Resources TWG Meetings.
- Sponsored two senior DHRA staff for a two-week training program on *Strengthening Human Resources for Health* at the Harvard School of Public Health (USA).

Task 1.2 MNCH document development, finalization and dissemination:

- Finalized and printed 500 copies of the *ADH Communication Strategy* and the *ADFHS Standards and Guidelines;* endorsed by MCDMCH
- Finalized the *National Peer Education training manual* by the ADH TWG; validated by MCDMCH
- Finalized the *Family Planning Guidelines and Protocols*, the *Family Planning Training Manual,* and the *Community-Based Distributor Training Manual*; validated by MCDMCH
- Finalized the *RED Strategy District and Facility Field Guides*
- Finalized the *IMCI Strategic Plan (2010 – 2017)*
- Finalized the *Essential Newborn Care (ENBC) Guidelines*
- Supported the national launch of the *ENBC Guidelines, Newborn Care Scale-up Framework* and the *IMCI Strategic Plan (2010- 2017).*
- Developed the *Maternal Adolescent Infant and Young Child Nutrition Guidelines*

1.2 MNCH Capacity-building:

- ***ADH:*** Trained 15 (8 males and 7 females) health care workers and 16 peer educators as provincial trainers in ADH.
- ***Family Planning:***
  - Trained 139 health providers (41 males and 98 females) which included 20 health workers and 20 Nurse Tutors and Clinical Instructors as LAFP trainers; 99 health care providers in LAFP methods provision from three districts.

- Trained 285 CBDs (males 142 and females 143). Trained 38 MCH Coordinators and health providers as CBD Supervisors.

- ***EmONC:***
  - Trained 5 health care providers in EmONC from 4 districts; mentored 14 doctors in emergency obstetric surgery from 5 districts; and trained 23 health workers as provincial EmONC trainers.
  - Upgraded midwifery skills labs and trained 25 tutors and clinical instructors in skills lab management at three midwifery schools (Chikankata, St. Paul's and Kitwe).
- ***Child Health and Nutrition:***
  - Procured ORT corner equipment for 38 health facilities in Kalomo District.
  - Supported IMCI post-training technical support supervision visits to 75 health workers (65 males and 10 females). Supported the production and distribution of 100 ICATT DVDs to 28 health training institutions.
  - Trained 45 Provincial EPI Core Group members (17males and 28 females), 25 DCHO staff (11males and 14 females) and 202 community volunteers (137 males and 65 females) in the *RED Strategy* and use of community registers.
  - Supported orientation of 65 provincial and district staff (14 males and 51 females) in *ENBC Guidelines*
  - Trained 105 (39 males, 66 females) health workers and 125 (51 males, 74 females) community volunteers trained in IYCF from four districts

Task 2.1 Clinical care:

- Supported the QI TWG through participation in meetings.
- Finalized the QI training package for the MOH/MCDMCH and oriented 29 provincial trainers. Trained 35 health care workers in QI.
- Provided QI technical support supervision to provincial and district QI teams.
- Distributed QI tools (Performance Improvement Approach Framework, Flow Charts, Fishbone Analysis and Five National QI Core Indicators) to all provinces.
- Conducted QI evaluation and wrote report.
- Strengthened CCTs in provinces and districts and exceeding the annual mentorship target (3311 mentorship sessions out of 3200 fiscal year target)
- Supported CCO planning meetings, orienting them on their roles and responsibilities as coordinators and familiarized with the mentorship tools and QI coaching.
- Participated in planning and ensuring QI and clinical mentorship programs sustained at provincial and district levels by appearing in the action plan and budgets.
- Supported Health Professions Council of Zambia (HPCZ) with dissemination of the *National Health Care Standards*
  - Participated in three conferences: 2nd National Pediatric ART Conference in Zambia (two presentations), Health Systems Research Symposium in South Africa (1 poster); QI and International Partnership Conference, organized by the Zambia UK Health Workforce Alliance (one presentation)

Task 2.2 Management:

- Printed and distributed 1000 copies of *The Seven Planning Steps for Managers and Planners in the Health Sector* to provinces and districts through MOH and MCDMCH respectively. Documents used as resource material during the 2014 annual planning process.
- Printed and distributed 2000 copies of *DQA Guidelines* to provinces and districts; oriented 71 program officers (51 males, 20 females) from MOH/MCDMCH in their application.
- Provided routine support to performance monitoring activities during bi-annual PA in ZISSP target districts.
- Disseminated copies of revised nursing standards.
- Trained 31 senior officers (21 males, 10 females) in the Systems for Health Accounting (SHA2) methodology (participants from MOH and MCDMCH and UNZA- Dept. of Economics).
- Provided financial support for data collection for the 6th round of the NHA (2011-2012 expenditure)
- Continued to support the ZMLA program: 177 trainees (2nd cohort) from 18 districts completed ZMLA training. Mentored 130 trainees from the first cohort (persons did not meet graduation criteria in 2013). Conducted graduation through NIPA for 307 (M 222, F 85) graduates.
- Finalized the *Report on the Financial Desk Review* for four districts.
- Produced the *ZMLA End of Project Evaluation Report* to determine the extent to which financial training addressed identified weaknesses and produced the intended outcomes in four districts.
- Completed a *Health Planning Documentation Study* to analyze the outcomes of ZISSP –led support to health planning.
- Presented an oral presentation on "Innovative tools for collecting and reporting health expenditure data on a routine basis: Key lessons from Zambia" at the International World Health Economics Association conference in Dublin, Ireland

Task 2.3 Malaria

- Trained in 414 health workers (165 males, 249 females) in FANC
- Trained 45 health workers (22 males, 23 females) in malaria case management
- Trained 410 CHWs (317 males, 93 females) in iCCM
- Installed the prefabricated insectary at NMCC.
- Developed the *Insecticide Resistance Management Plan*.
- Carried out post-IRS implementation data quality assessments.
- Expanded AID "Step D" activities in Mumbwa to extend the reach of malaria testing and treatment services with communities within Mumbwa district
- Introduced the use of tablets for data capture and transmission at the clinic, for all confirmed malaria cases, and in the community during reactive follow-ups under the AID program.
- Piloted the first automated feedback loop to clinics (the Malaria Rapid Reporting System) using a DHIS2 mobile application on a tablet, enabling clinics to view their data on a monthly basis and compare their performance to others within the district
- Initiated data review meetings conducted at the Lusaka District Health Office on a regular basis to improve malaria reporting in both HMIS and the Rapid Reporting systems
- Used Lusaka AID data to assist Lusaka District to target their 2014 IRS campaign, thus

influencing not only where spraying would be done within the district, but how many spray operators would be needed, consequently making the 2014 IRS campaign in the district, smarter.

Task 3: Community

- ***Community Planning:*** Trained NHCs/HCAC members in community health planning using the *Simplified Guide for Community Planning*. In Mpika and Kalomo districts, a health post and a mother's shelter were constructed spearheaded by NHC members.
- ***SMAGs:*** Trained 990 community members as SMAGs, including those trained as part of 18 radio distance learning groups. Distributed 2,300 birth plans through community grantees. The SMAGs went on to sensitize 68, 188 community members on maternal and child health, HIV prevention and care, and child nutrition.
- ***Community Grants:***
  - Oriented 1,473 traditional and community leaders on BCC for HIV prevention and care and MNCH
  - Reached 1,650 people with HIV counseling and testing.
  - Set up nine youth-friendly corners in health facilities and trained 70 peer educators.
  - Trained 56 CBDs.
  - Trained 185 NHC members in iCCM of malaria, and reached 19,810 community members with malaria messages through drama performances.
  - Procured 814 bicycles for community volunteers, and two motorcycles and five bicycle ambulances for NHCs.
- ***BCC:*** BCC capacity-building activities in 2014 reached 1131 people (786 males, 345 females). Contributing to this total, ZISSP finalized the *Integrated Health Toolkit for Zambian Traditional Leaders*, and trained 650 traditional leaders (565 males, 65 females) and 13 senior chiefs.

ANNEX B: LIFE OF PROJECT MONITORING AND EVALUATION RESULTS

Indicator Definition	Life of Project Target	Life of Project Achievement
Number of health care workers who successfully complete an in-service training program within the reporting period		
Grand Total	15,935[27]	22,733[28]
Clinical Mentorship	9.200	9,745
Management and Leadership Academy	1,642	2,674
Human Resource Management – Harvard Training	6	5
Male		1
Female		2
Record Management/Human Resource Information	100	167
Male		85
Female		82
Performance Management Package	250	472
Male		272
Female		200
Work Load Indicators of Staffing Needs (WISN)	100	71
Male		36
Female		35
Community Health Assistant Supervisors	408	207
Male		151
Female		56
Planning	390	410
Male		327
Female		83
Marginal Budgeting for Bottleneck (MBB)/ Financial Management	240	337
Male		268
Female		69

[27] The target of 15,935 is comprised of: 9,200 clinical mentorship, 1,642 ZMLA, 1,813 Health Systems Strengthening (Planning, Strategic Information, WISN, Marginal Budgeting for Bottleneck, Human Resource Information System, Supervisors for Community Health Assistants, Performance Management Package) and 3,280 under Behavior Change Communication

[28] 22,733 is the summation of 9,745 mentorship, 3,472 in other prevention, 3,472 in abstinence and be faithful, 2,674 ZMLA, and 3,370 in HSS (Topics include: Strategic information, Planning, Performance Management Package for Human Resources Management, WISN, Record Management, Marginal Budgeting for Bottlenecks, Human Resource Information Systems, Supervision of Community Health Assistants and Gender) has been achieved as of March 2014 since project inception.

Indicator Definition	Life of Project Target	Life of Project Achievement
Strategic Information	320	482
Male		324
Female		158
Gender	450	1,357
Males		717
Female		640
BCC/IEC methods or materials in ZISSP target districts	3,280	3,472
Male		2,295
Female		1,177
Number of new health care workers who graduated from a pre-service training institution within the reporting period		
Grand Total	580	307
Males	0	145
Female	0	162
Number of people trained in family planning and reproductive health with USG funds		
Grand Total	710	925
Males		383
Female		542
Health Workers	260	391
Males		114
Female		277
Community	450	534
Males		269
Female		265
Number of people trained in maternal/newborn health through USG supported programs		
Grand Total	3,574	4,523
Males		2,002
Female		2,521
Health Workers (EmONC Providers)	340	369
Males		159
Female		210
SMAG Master/District Trainers	234	248
Males		94
Female		154
Community Health Volunteers (SMAGs)	3,000	3,906
Males		1,749
Female		2,157

Indicator Definition	Life of Project Target	Life of Project Achievement
Number of people trained in child health and nutrition through USG supported programs		
Grand Total	1,664	2,875[29]
Males		1,431
Female		1,444
Infant and Young Child Feeding	682	625
Males		307
Female		318
Child Health	442	1,395
Males		715
Female		680
Community- Infant and Young Child Feeding	540	855
Males		409
Female		446
Number of people trained with USG funds to deliver IRS		
Grand Total	7,201	6,363[30]
Male		4,480
Female		1,883
Number of health workers trained in Intermittent Preventive Therapy (IPTp) with USG funds		
Grand Total	1,656	1,241[31]
Males		438
Female		803
Number of Community Health Workers trained in malaria case management with ACTs with USG funds		
Grand Total	1,512	1,604
Males		1,198
Female		406

[29] The achievement of 2,875 is comprised of: 2,020 (1,022 males/ 998 females) health care workers health workers. Of the 2,020 health workers trained; 625 (307 males/ 318 females) were trained in IYCF; 825 (419 males/406 females) were trained in RED strategy and 570 (296 males/274 females) in IMCI. ZISSP trained 855 (409 males/ 446 females) community health workers in Community-IYCF.

[30] The achievement is comprised of: sprayers and supervisors trained in 2010 (2,205 + 435) after updating the database in 2012 for 2011 (1,888) and 2012 (929) and 2013 (926) spraying periods. Of the total 6,363, 588 (467 males/121 females) were supervisors while 5,775 (4,013 males/1762 females) were spray operators.

[31] A total 1,241 were either trained or mentored in IPTp (Intermittent Preventive Therapy). Of this total, 1,067 (384 males/ 683 females) were trained in IPTp; 174 (54 males/120 females) mentored in FANC. In addition it is worth noting that ZISSP reported 617 (250 males/367 females) people mentored in PMTCT from June 2010 to September 2014 under the in-service training indicator. In total this means that 1,858 individuals benefitted from capacity building for IPTp

ANNEX C: MATERIALS DEVELOPED FOR MOH AND MCDMCH WITH ZISSP SUPPORT

Standards (Policies, Guidelines, Strategies, Frameworks, and Plans)	Training and reference materials (Curricula, job aids, flip charts, handbooks, etc.)	Reports and Briefs (including evaluations, assessments, and studies)	Other documents, systems and tools
Task 1.1 HRH			
• Performance Management Package Implementation Strategy and Plan • Zambia Health Workers Retention Scheme Sustainability Strategy	•	• An Evaluation of the Zambia Health Workers Retention Scheme of the Ministry of Health • Program Brief: *Strengthening Systems for Human Resources for Health.*	• Human Resources Information System • Human Resource Information System User Guide • Expanding on the existing Human Capital Management and Payroll Management and Establishment Control systems
Task 1.2 MNCH and Nutrition			
• Adolescent Health Strategic Plan 2011 to 2015 • Adolescent Health Communication Strategy • Adolescent Friendly-Health Services Standards and Guidelines • Family Planning Guidelines and Protocols.	• Adolescent Health Mentorship Tool • National Peer Education Training Manual (submitted to MCDMCH for approval) • Orientation Manual for Health Care Providers (7 modules out of 9 adapted) • Family Planning Training Manuals for Trainers and Participant • Community Based Distribution Training Manuals for Trainers and Participants. • EmONC Curriculum	• Report on Assessment of the DEM Program • An Assessment of the Implementation of the Reaching Every District Strategy in Selected Districts, December 2011 • An Assessment of the Functionality of Oral Rehydration Therapy (ORT) Corners and Feasibility of Providing Comprehensive Child Health Services in ORT Corners.	• Hospital Site Assessment Tool (EmONC) • Health Center Site Assessment Tool (EmONC) • Terms of Reference for EmONC TWG • Health Facility Action Plan (RED) • Community Child Health Registers

Standards (Policies, Guidelines, Strategies, Frameworks, and Plans)	Training and reference materials (Curricula, job aids, flip charts, handbooks, etc.)	Reports and Briefs (including evaluations, assessments, and studies)	Other documents, systems and tools
• Clinical Guidelines on the Use of Misoprostol for Prevention of Postpartum Hemorrhage in Zambia. • Comprehensive EmONC Training Plan (2011 – 2014) • National Integrated Management of Childhood Illnesses (IMCI) Strategic Plan 2013–2017 • Newborn Care Scale Up Framework • Essential Newborn Care (ENBC) Guidelines • Maternal, Adolescent, Infant and Young Child Nutrition [MAIYCN] Guidelines 2014 – 2018 • Zambia.	• Reaching Every Child in Every Community in Zambia – Guide for Health Center Teams.	• A report on Rapid Assessment of Long Acting Family Planning Training of Health Care Providers • External Assessment of the Baby Friendly Health Facility Initiative (BFHFI) in Five Districts • Technical Brief: *Improving Community Capacities in Infant and Young Child Feeding.* • Technical Brief: *Improving skills labs to strengthen midwifery pre-service education* • Technical Brief: *In-Service Training of Health Providers in EmONC* • Program Brief: *Systems Strengthening to Improve Child Health and Nutrition Services* • Program Brief: *Systems Strengthening to Improve Uptake and Delivery of Reproductive Health Services* • Nutrition policy briefs on Agriculture, Multi-sectoral approaches, Food fortification, Economic development, Maternity protection, Social protection and Water and Sanitation.	• ORT/Child Health Corner Register • Supportive Supervisory Tool for Reaching Every District Strategy
Task 2.1 Clinical Care			
• Guidelines for Clinical mentorship of health care workers in Zambia • Guidelines on Quality Improvement for health care workers in Zambia	• MOH mentorship training package (Facilitators and Participants) • Manual for Quality improvement training of health care workers in Zambia (Trainers and Participants) • Quality of Health Care -Using a Quality Improvement Approach Field Work Guide	• Evaluation Report: Provincial Quarterly Review Meetings • An assessment of the knowledge, attitudes and practices of health workers towards the Anti-Retroviral Theray (ART) accreditation program.	• n/a

Standards (Policies, Guidelines, Strategies, Frameworks, and Plans)	Training and reference materials (Curricula, job aids, flip charts, handbooks, etc.)	Reports and Briefs (including evaluations, assessments, and studies)	Other documents, systems and tools
		• Improving Quality Using a Health Systems Approach: The ZISSP Experience. Volume 1: An Assessment of Quality Improvement in Zambia through ZISSP Support to the MOH. Volume 2: A Case Study Approach • Program Brief: *Standardizing and Scaling Up Quality Improvement and Clinical Mentorship in the Zambian Health System.*	
Task 2.2. Management and Leadership			
• Data Quality Audit Guidelines (Health Management Information System) Version1.	• Review of Performance Assessment Tool- Report and Revised Tools. • Planning Handbook for Ministry of Health Headquarters and Provincial Health Offices. • Action Planning Handbook for District Health Teams • Action Planning Handbook for Hospital Teams • Action Planning Handbook for Health Centers, Health Posts and Communities • Action Planning Handbook for Statutory Boards • Action Planning Handbook for District Health Teams • in the Health Sector • Zambia Management and Leadership Academy- Facilitator Guide • Zambia Management and Leadership Academy- Mentor manual • Zambia Management and Leadership Academy- Participant manual	• Report of Annual Ministry of Health Planning Process (prepared for 2011, 2012 and 2013 processes) • Health Planning Study Report 2014 • Findings from the Resource Tracking Tool Pilot at District Level- Report • A report on the Financial Desk Review: Kapiri-Mposhi, Mbala, Mpika & Serenje District Community Medical Offices • ZMLA 2013 Program Review Meeting Report • ZMLA 2014 End of Program Performance Evaluation Report • Program Brief: *Strengthening Management Systems for Delivery of High-Impact Health Services.* • Program Brief: *ZISSP Support to the Technical Working Groups in the Zambian Health Sector*	• 2011 Annual Statistical Bulletin – prepared for Copperbelt, Western, North Western, Lusaka, Eastern, Luapula, Central, Muchinga and Northern Provinces.

Standards (Policies, Guidelines, Strategies, Frameworks, and Plans)	Training and reference materials (Curricula, job aids, flip charts, handbooks, etc.)	Reports and Briefs (including evaluations, assessments, and studies)	Other documents, systems and tools
Task 2.3 Malaria			
• Zambia Insecticide Resistance Management Plan • IRS Guidelines • Pregnancy, Childbirth, Postpartum and New-born Care Guidelines • 4th Edition, Malaria Treatment guidelines	• IRS Operations Manual • IRS Standard Operation Procedures • IRS Needs Assessment Checklist • IRS Monitoring and Supervision Checklist • IRS Spray Operator Form • IRS TOT Training Modules • IRS TOT Training Schedule • IRS Cascade Training Modules • IRS Cascade Training Schedule • Focused Antenatal Care Participants and Facilitators Manual • Malaria active case surveillance template and training materials, 2011. • Malaria Active Infection Detection (AID) index and community forms and training curriculum. Forms were initially paper-based and later (2014) electronic. The index form is showcased within the World Health Organization Manual titled: Community based reduction of malaria transmission, Annex 1. *http://www.who.int/malaria/publications/atoz/9789241502719/en/* • Tablet training curriculum, AID, Lusaka, 2014.	• Z. Chisha, DA Larsen, M Burns, JM Miller, J Chirwa, C Mbwili, DJ Bridges, M Kamuliwo, M Hawela, KR Tan, AS Craig, A Winters. Enhanced surveillance and data feedback loop associated with improved malaria data in Lusaka, Zambia. Malaria Journal. Submitted October 2014. • A. Winters, Z. Chisha, B. Winters, M. Mwanza, M Kamuliwo, C Mbwili, C Sichitamba-Wamulume, M Hawela, J Chirwa, M Burns, KR Tan, D Bridges, J Miller, AS Craig. Operational and sustainable surveillance to support the goal of malaria elimination in Lusaka District, Zambia; Malaria Surveillance in Low Transmission Settings - How to Make it Effective and Sustainable. Malaria Journal. In preparation. • Program Brief: *Comprehensive Malaria Interventions in Zambia*	• IRS Data Quality Assessment Guide • IRS Data Quality Assessment Questionnaire

Standards (Policies, Guidelines, Strategies, Frameworks, and Plans)	Training and reference materials (Curricula, job aids, flip charts, handbooks, etc.)	Reports and Briefs (including evaluations, assessments, and studies)	Other documents, systems and tools
Task 3 Community			
• Community Behavior Change Communication Framework	• Action Planning Handbook for Health Centres, Health Posts and Communities • Simplified Guide to Community health Planning, Facilitator's manual 2013 • Simplified Guide to Community health Planning, Participant's manual 2013 • Orientation Package for Grants Support Teams • Grants Management Training Manual • Organizational Capacity Building Training Manual. • SMAG training manuals • SMAG Radio Distance Learning Program (26 topics) and listeners guide • Training community theatre groups (participant's reference guide, facilitator manual, and a training video) • Integrated Health Toolkit for Zambian Traditional Leaders	• Community Planning status report (March 2013) • The Community Health Services Mapping Report. (December 2011) • Annual Program Statement (Grants Program) • A report on engagement of traditional leaders in community health • A Report On The Process, Challenges, Successes, Opportunities and Lessons Learnt in the Drama Capacity Building Training • Impact of Safe Motherhood Action Groups on Use of Maternal Health Care in Zambia. (2014) • Program Brief: *Engaging Communities in Health Planning and Promotion*	• SMAGs Community Aggregation and Reporting Form (SCARF) • SMAG data management tools (Health center, district office, and provincial/national aggregation forms) • SMAG counseling flip chart • Safe motherhood posters • Grants Manual • Grants Analysis Plan

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